

SIXTY-FIFTH

ANNUAL MEETING

OF THE

American Institute of Instruction

LECTURES, DISCUSSIONS, AND PROCEEDINGS

Portland, Me., July 8-11, 1895

Published by order of the Board of Directors

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AMERICAN INSTITUTE OF INSTRUCTION.

SIXTY-FIFTH ANNUAL MEETING,

JULY 8, 9, 10, AND 11, 1895.

JOURNAL OF PROCEEDINGS.

FIRST DAY—MONDAY, July 8.

EVENING SESSION.

The sixty-fifth annual meeting of the American Institute of Instruction opened in the City Hall, Portland, Me., Monday evening, July 8, 1895.

The President, Hon. W. W. Stetson, of Auburn, Me., called the Institute to order at 8:10 p. m.

Devotional exercises were conducted by Rev. Rollin T. Hack, pastor Second Parish church, Portland.

The President then introduced the Temple Quartette of Boston,—E. M. Spears, 1st tenor; E. F. Webber, 2d tenor; Robert Bruce, 1st bass; L. B. Merrill, 2d bass,—who sang "Comrades in Arms" by Adams, and, as an encore, "Fairest Is She" by Nevins.

President Stetson extended a cordial welcome to the members of the Institute in behalf of the directors, and introduced His Excellency, Gov. Henry B.

Cleaves, who welcomed the Institute in the name of the State of Maine.

WELCOME.

Governor Cleaves spoke as follows :

Mr. President, Ladies, and Gentlemen :—It is with pleasure that I welcome to our state the members of the American Institute of Instruction. Your organization has exercised a powerful influence for more than sixty years in promoting and advancing the cause of popular education, and I bring to you, with full and overflowing measure, the cordial greetings of the people of Maine, and extend to you a generous welcome within our limits.

I need not come here to tender you the freedom of our magnificent and prosperous commonwealth, for the great cause you represent holds a commanding position in every city, in every town, and hamlet, and home throughout our borders. Wherever you may travel within our attractive and progressive domain, you will find the cause of education dear to our people; you will be welcomed with the greatest hospitality, and made to feel that you are not strangers within our gates.

We feel especially honored by your presence in our commonwealth, and appreciate the distinguished honor bestowed at your last session in the selection of one of our citizens as your president. You come to a state that has always shown its devotion to the great cause of education, and at no time in her history has she ever failed to recognize that the stability, and safety, and power of the commonwealth could best be preserved and promoted by the education of its children. Upon those who are directing the educational forces of our country a great responsibility rests. They are to grapple with the problems of to-day, and meet the new questions and conditions that are rapidly crowding themselves upon us. We can but appreciate, however, even with the advanced educational thought of the present, that many of the old landmarks erected by our fathers are worth preserving; that in many respects the old-fashioned is not to be despised.

Our state glories in her excellent educational system; she boasts of the superior advantages of her colleges and numerous seminaries of learning; she takes a natural pride in her normal

schools, her academies, and her grand free high school system. Her common schools, the avenues to which are wide open to all, the nurseries of good and pure government, are guarded with an enthusiastic pride; and to the honor of our state, everywhere upon the soil the cause of education sits enthroned, the standard never to be lowered, but raised higher and higher as the years go by.

I trust you may have an agreeable and profitable session, and the good influence of your work will further stimulate the cause of education; and when you return to your homes may you carry with you the most pleasant recollections of our state and her people. Welcome to the state of Maine!

President Stetson then presented His Honor Mayor Baxter, who welcomed the Institute in behalf of Portland, in the following address:

Among the duties officially devolving upon me, none is more pleasant than welcoming to our city the representatives of such noble associations as this, whose purpose it is to promote the public welfare by making the blessings of education more and more available to the world.

Time was, though we can poorly realize it now, when it was contended that universal education would so change the structure of society as to imperil its existence; and men who claimed a standing in the ranks of the thoughtful, conscientiously opposed popular education on the ground that it would incapacitate the larger portion of mankind for industrial pursuits; and, viewed from the standpoint of such reasoning, there was in it an appearance of truth.

No farther back than Franklin's time, education was largely theoretical, and for some time later, continued following the ruts of custom as though no other path were possible. It is true that Bacon, to whom the world is so greatly indebted for splendid thoughts, uttered long before Franklin's time his well known aphorism that "Education is the cultivation of a just and legitimate familiarity betwixt the mind and things;" yet, although these remarkably true words have vibrated upon the ears of men for nearly three centuries, it is only recently that they have attracted any considerable attention. Theoretical education, such as those who opposed popular education were alone considering, might be

of small use to the masses of men who were struggling for existence; but in this country, where men from the start had to face the practical problems of life, education of necessity involved to some extent a familiarity of the mind with things.

It is curious to note, however, that in England, which still lacks a public school system, and where education is much more theoretical than with us, the old opposition to popular education still finds an echo. I quote from a somewhat recent issue of the *London Saturday Review* an article entitled "The Curse of Education:"

"Ever since the enormous enlargement numerically of the English universities, there can be little doubt that the value of a degree has gone down commercially. The number of first-class men seeking work and finding none is a sorry comment on the development of the English university system. If this is true of the first class, what must be the lot of the second, the third, and the pass man? The learned professions, in fact, are overcrowded. The cause of this unhappy crowding of the market for brain workers is not far to seek.

"An immense number of persons who in former times would have worked with their hands, as their fathers did before them, are being educated to work with their heads. There is a general leveling up of the social grades if you look at it optimistically. The son of the artisan becomes a clerk; the son of a clerk aspires to teach in a school; the son of a school teacher aspires to go to Oxford or Cambridge; but this levelling up is not an unmixed blessing. The result is that we have fifty times too many clerks—two hundred applied for an insignificant post advertised the other day; ten times too many half-educated teachers, and, alas, ten times too many university graduates turned out every year to crowd the ranks of the bar, the schools, and journalism, and recruit the year's crop of miserable and hopeless failures. None of these people can dig as their fathers did. They cannot make shop boys or busmen or crossing-sweepers. Too many of them can only teach or starve. It is really impossible to deny that a certain degree of intellectual education unfits a man to work with his hands and earn his bread as a laborer. It may be that it ought not to be so, but in the present imperfect state of the world so it is. Therefore somehow or other, places must be found for this enormous harvest of tolerable scholars." This would be dis-

heartening if no solution to the difficulty could be found, but the problem of education has recently been brought to the test of critical study more directly than ever before; and the demand now is for an education of the whole man; the proper training of every faculty which God has given him. Whether, however, public education ought to be carried beyond the point attained by the present grammar school, or perhaps to be better understood, whether the state should attempt to furnish more than a good common school education, leaving those who desire to pursue more advanced courses of study to seek the academy or college fitting school, is a question yet to be settled, and one which demands the consideration of our best educators."

When Bacon uttered the aphorism which has been quoted, the education of the masses was doubtless far from his thought; in fact, anyone who had suggested popular education as a means of relief from the dismal condition of affairs then existing would have been forthwith fitted to a straight jacket or something worse. It required a virgin soil in which to root popular education, and Providence, in the fulness of time, provided both the soil and the men competent to plant and nurture it. No men but the founders of New England could have undertaken the novel task with any hope of success, and no unprejudiced mind can regard them as other than men of remarkable wisdom and virtue. Americans should always hold in reverence these men. In the weary days and nights, when the ships, which bore them and so much they held dear, were pursuing an almost unknown pathway to the new world, they were cogitating methods of republic building, and one of the corner stones of the fabric, which they beheld in vision, was the public school. As soon as possible, nay almost sooner than it seems possible, when we consider the disheartening obstacles which surrounded them, these heroic and self-sacrificing men began to put plumb and level to this indispensable support to the future republic. Of course they wrought better than they knew. All men who work on the lines so dimly discernible to human vision, which Providence has marked out, always build better than they know; nevertheless, to them belongs the honor which is due to the world's greatest benefactors. Hampered as they were by poverty and exposed to constant danger of attack from savage tribes which surrounded them, the school which they laboriously set up in the wilderness was necessarily bare of conven-

iences, and the course of study simple in the extreme; reading, writing, some arithmetic and geography, and a spice of grammar, was about all. They fully believed in some religious training, hence the use of the New England primer, which informed the pupil that in "Adam's fall we sinned all," that "Xerxes the Great did die and so must you and I," and other similar facts.

The greater portion of the education of the children of these men was acquired in the school of experience, and they grew up to the full stature of self-reliant manhood; hence, we in this country have not been disturbed with wails from the public press like this which I have quoted from our London contemporary. We might, however, in time have reached a similar condition, but fortunately, as I have before said, our public educators have discovered that intellectual education alone is not an equipment with which all can successfully meet those obstacles which so many are called upon to encounter, and have decreed that a true system of education must provide for the education of the whole man; hence, our American educators have adopted the kindergarten, the manual training school, and various methods of technical instruction. What America wants is whole men, men with brains and hearts and hands trained to efficient service. This is the creed which the American Institute of Instruction believes in, if I may judge from the utterances of some of its most advanced thinkers. It is a noble creed, and you are engaged in a pious work, begun by the fathers when the foundations of the republic were laid in blood and tears, and it will be carried on by generations of your successors until that glorious day when all men shall see eye to eye.

When I turn back to that memorable page in the Genesis of New England, whereon is recorded the efforts of these noble men to establish popular education in this country, and, realizing the hard conditions which surrounded them, turn to the present, and behold the complex and magnificent system which now prevails, I can but conclude that the men who have wrought these marvels are worthy sons of worthy sires and wish them God speed. Among these worthy sons of men who made education and religion the corner stones of our social fabric, are the members of the American Institute of Instruction, and as such, in behalf of the citizens of Portland, I extend to you a hearty welcome to our city.

The address of the evening was delivered by President E. Benjamin Andrews of Brown University, on "THE PUBLIC SCHOOL SYSTEM AS A MEANS OF SOCIAL ADVANCEMENT."

[For all addresses and the lengthier speeches in debate, the reader is referred to pages of this volume following the Journal of Proceedings and its appendices. The two parts of the volume are distinguished by difference in style of paging.]

After the President had announced that a meeting of the directors would be held in front of the platform immediately after adjournment the Temple Quartette sang "Serenade," by Chadwick.

SECOND DAY—TUESDAY, July 9.

MORNING SESSION.

The meeting of the Institute was called to order in City Hall by President Stetson at 9:15 a. m.

The devotional exercises were conducted by J. Willard Brown, of the Emerson School, Boston.

The Temple Quartette sang "Remember Now Thy Creator" by Rhodes, and, as an encore, "Heavenly Father" by Chadwick.

The President then called upon Secretary Parmenter who read a paper on "THE RELATION OF MANUAL TRAINING TO CERTAIN MENTAL DEFECTS," prepared by General Francis A. Walker, President of the Massachusetts Institute of Technology, who was unavoidably absent.

The next paper was by Henry S. Baker, Ph. D., of St. Paul, Minn., on "THE RELATION OF FATIGUE TO

EDUCATIONAL AND SOCIAL PROGRESS." At the close of this paper there was a general discussion participated in by Superintendent Carroll, of Worcester, Mass., Principal Thompson, of Fitchburg, Mass., Supt. O. B. Bruce, of Lynn, Mass., Prin. James S. Barrell, of Cambridge, Mass., Dr. W. E. Sheldon, and Prof. James B. Taylor, of Boston.

Mr. Barrell took exception to Dr. Baker's views as to the necessity of a quiet school room. Superintendent Bruce inquired as to the value of military training in the High school. Dr. Sheldon made the point that, while the typical American is too nervous to think valuably, yet there are many who are essentially stupid. He thought pupils need more activity. The President then announced the following committees:

On Membership.

Alvin F. Pease, Northampton, Mass.,
Joseph E. Mowry, Providence, R. I.,
C. L. Ames, Hartford, Conn.,
And the President, Secretary, and Treasurer.

On Resolutions.

Francis W. Cogswell, Cambridge, Mass.
O. H. Drake, Pittsfield, Mass.
L. S. Hastings, Nashua, N. H.
W. W. Curtis, Pawtucket, R. I.
John H. Peck, New Britain, Conn.
Edward Conant, Randolph, Vt.

On Nominations.

O. B. Bruce, Massachusetts.
Channing Folsom, New Hampshire.
A. W. Harris, Maine.
Hon. Thomas B. Stockwell, Rhode Island.
A. H. Campbell, Vermont.
D. N. Camp, Connecticut.

The Temple Quartette rendered "Waltz Song" by Lamather.

The last paper of the morning session was by Miss Caroline M. Hewins, of the Hartford, Conn., Public Library, on "LIBRARY METHODS OF STUDY." At the close of this paper the Institute stood adjourned until the evening session.

SECOND DAY—TUESDAY, July 9.

EVENING SESSION.

The Institute was called to order at the appointed hour by the President.

The Temple Quartette sang "Sailors' Chorus" by Gwent, and as an encore "Gay Hearts Waltz" by Macy.

The President read a letter from President Gates, of Amherst, expressing regret at his inability to be present, owing to illness in his family.

Chancellor Day of Syracuse, one of the appointed speakers, was absent. President C. F. Thwing, of Adelbert College, was unable to be present, but his paper was read by Rev. Dr. James G. Merrill, of Portland. His theme was, "WHAT MORE CAN THE AMERICAN COLLEGE DO TO HELP AMERICAN LIFE?"

It was a great satisfaction to the President and the Institute that President-elect B. L. Whitman, of Columbian University, Washington, D. C., but recently of Colby University, gave a spirited and able address on "EDUCATION, THE END; THE TEACHER'S TASK; AND THE WAYS AND MEANS OF ACCOMPLISHING IT."

The Temple Quartette sang "A Summer Night" by Dudley Buck, and the session stood adjourned.

THIRD DAY—WEDNESDAY, July 10.

MORNING SESSION.

The Institute was called to order by the President at the appointed hour and the devotions were conducted by Rev. Dr. Henry Blanchard, of Portland.

The Temple Quartette rendered "Morning Song," and in response to two recalls, "Owl and Pussy Cat" by De Koven, and "Woodland Roses" by Mair.

Mr. W. W. Merrill announced an excursion among the islands of Portland Harbor, generously provided by the Board of Trade, for the members of the Institute, to take place in the afternoon.

The first paper of this session was by Supt. Clarence F. Carroll, of Worcester, Mass., on "DESIRABLE MODIFICATIONS OF ELEMENTARY SCHOOL PROGRAMMES."

The Temple Quartette then sang "March—Forward" by Storch.

The subject presented by Superintendent Carroll was then treated by A. H. Campbell, Ph. D., of the Johnson, Vt., Normal School.

The next paper was by Principal Lemuel S. Hastings, of the Nashua, N. H., High School, his theme being "WHAT A GRAMMAR SCHOOL GRADUATE SHOULD KNOW AND BE ABLE TO DO."

The last paper was by Principal William T. Peck, Sc. D., of the Providence, R. I., High School (classical department) on "CONDITIONS OF PROGRAMME MAKING IN SECONDARY SCHOOLS." The President then declared the Institute adjourned until the evening session.

Note. Attendance.

The attendance at this session was about eight hundred, and an audience equally as large was present Tuesday morning. Monday evening the hall was well filled, and Tuesday evening, notwithstanding the rain, the audience was large and enthusiastic.

THIRD DAY—WEDNESDAY, July 10.

EVENING SESSION.

The evening exercises were opened with announcements by President Stetson. The Temple Quartette sang "Tars' Song" by Hatton, and, on being recalled twice, "There Was a Man" (Anon.) and "Palacca" by Clark.

The first paper was by Samuel Thurber, Ph. D., Master of the Girls' High School, Boston, on "THE RESPONSE OF THE PUBLIC SCHOOL TO THE DEMANDS OF THE PUBLIC." The Temple Quartette then sang "Sunset" by Van de Water.

The final exercise of the evening was an illustrated lecture on "CHILD'S STUDY" by Prof. E. W. Scripture, Ph. D., of Yale University. This was illustrated by the stereopticon. An audience was present numbering from fifteen hundred to two thousand.

FOURTH DAY—THURSDAY, July 11.

MORNING SESSION.

The Institute met at the appointed hour. Devotions were conducted by Rev. Dr. Henry Blanchard of Portland. The Temple Quartette sang "Loyal Song" by Kücken, and "Spinneth a Maiden" by Junet.

Mr. George H. Conley, supervisor of schools, Boston, presented a paper on "WHAT THE COMMUNITY OWES THE SCHOOL." The Temple Quartette sang "Serenade" by Hanscom.

President George C. Chase, of Bates College, then presented a paper on "WHAT THE SCHOOL OWES THE COMMUNITY."

After a brief intermission the subject of "DEPARTMENTAL INSTRUCTION" was presented by Supt. Walter P. Beckwith, Adams, Mass.

At this point Dr. Scripture, by request, explained further the scope of child study.

Dr. Baker inquired about the application of experimental psychology to child study.

Dr. Scripture illustrated by experiments on President Stetson with particular reference to the line of thought.

Mrs. Beattie asked about its application when pupils are tired and fatigued.

Mrs. Hunt asked what was to be done if the child did not touch the right spot at the right time. Dr. Scripture replied that if after a time the child did not have proper control, he would consult a physician.

This closed the literary part of the Institute and the next feature was routine business.

Mr. D. N. Camp for the Committee on Necrology made the following report:

REPORT OF THE COMMITTEE ON NECROLOGY.

During the past year few deaths, it is believed, have occurred among the active members of the Institute. But in the wider circle of those who have been mem-

bers for a brief period, and have been identified with this association by contributing lectures or papers at its meetings, more have passed away. Some of these by the wisdom of their words and the fruitfulness of their works in the cause of education and humanity had a national reputation, and in accordance with custom have a passing notice :

Hon. Robert C. Winthrop was born in Boston May 12, 1809, and graduated at Harvard University in 1828. He studied law with Daniel Webster and was a personal friend of Henry Clay.

He was in Congress several years, speaker of the House of Representatives, 1847-'49, and the successor of Daniel Webster in the Senate. For twenty-five years he was president of the Boston Provident Association, and for thirty years of the Massachusetts Historical Society, giving much time to both.

He was for many years the counselor of George Peabody, and devoted thirty years of his life to the cause of education, principally in the administration of the Peabody fund at the South, by which thousands were blessed.

He died November 16, 1894, aged 85.

In the same month that this veteran educator passed to his rest, one in the vigor of life and health was suddenly taken from our ranks of active members.

Sylvester Brown, a prominent public school teacher of Boston, was born in Bow, N. H., in 1848. He graduated from Colby Academy at New London, N. H., in 1871, and became principal of the Dunbarton High school the same year. The next year he was master of a Massachusetts grammar school, and in 1876 went to Quincy as principal of the Quincy School at Atlantic. In 1878 he was transferred to the Willard School in West Quincy, and in 1879 went to the Brookline School in Brookline.

In April, 1880, he became superintendent of the Quincy schools. In 1883 he resigned to accept a position in the Prince School, Boston, and in the same year was elected master of the Martin School of that city. He had been in attendance at the Massachusetts Teachers' Association, when, on his return, on the afternoon of November 30, he was killed by the cars at Wollaston in sight of his home.

Mr. Brown as a citizen, as a teacher, and as a friend and co-worker was much respected, beloved, and honored.

Miss Elizabeth Palmer Peabody was born in Billerica, Mass., May 16, 1804. She was for many years a successful teacher in Boston and vicinity. She was one of the first to introduce kindergarten instruction into the United States, and, by her speech and writings, she did much to improve the early instruction of children. She read an essay before this Institute in 1850, and again more recently, and she repeatedly directed her efforts to the improvement of schools and the advancement of society.

Rev. Julius H. Seelye, D. D., LL. D., was born in Bethel, Conn., September 14, 1824. He graduated at Amherst College in 1840, and from Andover Seminary in 1843. He was settled as pastor over the First Dutch Reformed church of Schenectady soon after graduation from the seminary, but left the pastorate in 1858 to become professor of mental and moral philosophy at Amherst College. He was president of the college from 1877 to 1890, discharging his duties with fidelity and wisdom. He was preëminently a teacher, impressing his personal enthusiasm on many of the students. He was largely instrumental in multiplying the buildings, beautifying the grounds, and increasing the financial resources of Amherst College. He had an appointment to lecture before the American Institute as early as 1867, and in 1874 gave his lecture on the "Relations of the Secular and Religious in Education," at the annual meeting at North Adams, Mass., and in 1883 at Fabyans, White Mountains, he lectured on "The Education We Need." He was for a time member of Congress, and here, as in every other position, his regard for right and love of truth were stronger than his adherence to party or desire for place or office.

Miss Maria R. Mann, niece of Horace Mann, an early graduate of Bridgewater Normal School, Mass., and for a long time teacher in Massachusetts and Rhode Island, died November 27, 1894, aged 77. During the Civil War she was employed by the Western Sanitary Commission and sent to Helena, Ark., Vicksburg, Miss., and other places, and since the close of the war her life has been devoted to the education of the colored race, much of the time in Washington, D. C.

Dr. John Lord, historian, was born in Portsmouth, N. H., September 10, 1811. He graduated at Dartmouth College in

1833. His life was largely devoted to the study of history and its recital. He lectured more than 6,000 times and published several volumes, the last being "Beacon Lights of History." He died at Stamford, Conn., December 15, 1894.

Luther E. Leland, for many years one of the prominent principals of Massachusetts, became a member of the American Institute of Instruction in 1860. He was a frequent attendant at its meetings and at those of local associations. After an experience as principal for a period of time exceeded by few principals in New England outside of Boston, and most of this period at Newton, he died, January 13, 1895, aged 69, much respected and beloved.

It may be said of all these whose names have been mentioned that the world was made richer by their lives.

D. N. CAMP,
J. S. BARRELL,
Committee on Necrology.

The report of the Committee on Membership was presented by the chairman, Superintendent Alvin F. Pease of Northampton, Mass. This was received and adopted.

Mr. John H. Peck presented the report for the Committee on Resolutions, which was unanimously adopted.

Resolved, That the Institute desires to express its high appreciation of the hearty invitation to visit this beautiful city, extended by the Board of Trade, and for the financial support of that organization, which, through the wise plans and untiring efforts of the local committees, has assured the success of this meeting.

Resolved, That the Institute tenders its hearty thanks to the members of the Local Committees, to the Ladies' Literary Union, and to the citizens of Portland, whose delicate courtesies have anticipated every want, and lightened, in numberless ways, the tasks of the officers and speakers, for attendance on our meetings, and for courtesy of excursions, Thursday p. m.

Resolved, That the thanks of the American Institute are due, and they are hereby tendered, to the several railroads that have

made liberal reductions in rates to our members, to the proprietors of the numerous hotels and boarding-houses in Portland for favorable terms, to the local press for the publication of the programmes and advance notices of all details of the meetings, and for full and accurate reports of the proceedings, to the City Government of Portland for its liberal appropriation for the entertainment of the Institute, to His Excellency the Governor and to His Honor the Mayor for their hearty welcome and wise words of counsel, to the several speakers for their able and stimulating addresses, and to the Temple Quartette of Boston for the repeated contributions which they have made to our enjoyment.

Resolved, That we desire to record our appreciation of the efficient services of the executive officers who have had this meeting in charge, and to express our special obligation to the President for the able manner in which he has administered the arduous duties of his office.

The report for the Committee on Nominations was presented by the chairman, O. B. Bruce of Lynn, Mass. It was unanimously voted that Hon. Thomas B. Stockwell of Providence, R. I., cast one ballot bearing the names presented. The ballot was cast, and the President declared the officers nominated duly elected.

[The list of officers of the Institute, with the Constitution and a list of active members, will be found in the pages following this "Journal of Proceedings" and preceding the addresses.]

President Stetson in a brief but pointed speech surrendered the gavel to President elect Parmenter, who responded :

I thank you heartily for the gracious manner in which you have presented me this emblem of authority. While I appreciate highly the statements that you have been pleased to make I am confident that your kindness of heart has led you to magnify my services to the Institute.

No one can study the history of this organization without being convinced that it is impossible to overestimate the service that it has rendered to the educational interests of New England. It is the plain duty of those to whom its management is now committed to spare no effort to maintain the high standard that others have established.

I am conscious that I have little of the profound scholarship, the masterful command of men, the dignity and grace to preside, the fertility of resource and ready wit, that have characterized the long line of distinguished men that have preceded me, and that have been exhibited in such eminent degree by the gentleman who has just taken his seat. No man, however, appreciates more than I any honor conferred by his fellow teachers, and I promise to give to the trust committed to me my best thought, hoping that patient service and faithful discharge of duty will merit a fair measure of approval.

President Parmenter then assumed the duty of his office, called the customary meeting of the directors to be held at the conclusion of the session, and declared the sixty-fifth annual meeting of the American Institute adjourned *sine die*.

A meeting of the directors was called at the close of the first evening session, and again at the close of the first morning session, but no quorum could be obtained. With the unanimous consent of those present, the President directed the Treasurer to collect the usual membership fee of one dollar for the current year.

The Board of Trade of Portland, through the committee, consisting of President Winslow, Secretary Merrill, and Col. Henry S. Osgood, provided an excursion for the members of the Institute for Thursday afternoon.

This excursion was a very enjoyable affair. The

committee provided the elegant steamboat, *Bay State*, and Chandler's Band for music. The Temple Quartette rendered selections during the afternoon.

This was only one of the many courtesies extended to the Institute by the Board of Trade of Portland.

CONSTITUTION
OF THE
AMERICAN INSTITUTE OF INSTRUCTION.

Adopted August, 1870, as a substitute for the older one,
and amended July, 1886, and July, 1891.

PREAMBLE.

We, whose names are hereunto subjoined, pledging our zealous efforts to promote the cause of popular education, agree to adopt the following Constitution :

ARTICLE I.—NAME.

The society shall be known by the title of the American Institute of Instruction.

ARTICLE II.—MEMBERS.

1. The members of this Institute shall be divided into three classes, styled active, associate, and honorary.

2. Any person interested in the cause of education and recommended by the Committee on Membership may become an active member by a major vote of the members present and voting at any regular meeting.

3. Only active members shall be empowered to vote and hold office.

4. Any active member, who shall for the period of one year neglect to pay the annual assessment, shall by such neglect forfeit his membership.

5. Any person of good moral character may become an associate member for the current year by paying the annual assessment.

6. Honorary members may be elected by the Institute on recommendation of two thirds of the Directors present at any stated meeting of the Board.

ARTICLE III.—MEETINGS.

1. The Annual Meeting shall be held at such time and place as the Board of Directors shall appoint.
2. Special meetings may be called by the Directors.
3. Due notice of the meetings of the Institute shall be given in the public journals.

ARTICLE IV.—OFFICERS.

1. The officers of the Institute shall be a President, Vice-Presidents, a Secretary, an Assistant Secretary, a Treasurer, an Assistant Treasurer, and twelve Counsellors, all of whom shall constitute a Board of Directors.
2. The officers shall be elected annually by ballot, and shall continue in office till their successors shall be chosen.

ARTICLE V.—DUTIES OF OFFICERS.

1. The Secretary shall give notice of all meetings of the Institute and of the Board of Directors and shall keep a record of their transactions.
2. The Treasurer shall collect and receive all moneys of the Institute and shall render an accurate statement of his receipts and payments annually, and whenever called upon by the Board of Directors, to whom he shall give such bonds for the faithful performance of his duty as they shall require. He shall make no payment, except by order of the Finance Committee of the Board.
3. The Board of Directors shall devise and carry into execution such measures as may promote the general interests of the Institute, shall have charge of the property of the Institute, shall be authorized to publish its proceedings and such papers relating to education as may seem to them desirable. They shall have power to fill all vacancies in their Board, from members of the Institute, and make By-Laws for its government. They shall have power to vote an annual assessment of one dollar upon the members, except honorary members, and to remit the payment thereof,

when in their judgment it may seem wise to do so. They shall annually elect the following standing committees :

(1) A committee of three, who with the President, Secretary, and Treasurer, shall constitute the Committee on Membership, whose duty it shall be to report to the Institute, from time to time, the names of such persons as they may recommend for membership.

(2) A committee of three on Finance, whose duty it shall be to audit the accounts of the Treasurer and, under the control of the Board of Directors, to draw orders on the Treasurer for the payment of charges against the Institute.

(3) A committee of three on Necrology.

4. Stated meetings of the Board shall be held on the first Saturday in January and on the first day of the Annual Meeting of the Institute.

ARTICLE VI.—BY-LAWS AND AMENDMENTS.

1. By-Laws not repugnant to this Constitution may be adopted at any regular meeting.

2. This Constitution may be altered or amended by a vote of two thirds of the members present at the Annual Meeting provided two thirds of the directors present at a stated meeting shall agree to recommend the proposed alteration or amendment.

BY-LAWS.

1. At all Meetings of the Board of Directors, seven members shall be necessary to constitute a quorum to do business.

2. It shall be the duty of the Secretary, on application of any two Directors, to call special meetings of the Board at such time and place as the President may appoint.

3. Before each Annual Meeting, the Treasurer shall have printed certificates of membership, numbered consecutively from one upward. These certificates shall be attached to stubs having the corresponding numbers printed thereon. The book of stubs left after the certificates of membership are detached therefrom shall form a part of the Treasurer's account, to be delivered to the Finance Committee, for the purpose of auditing the accounts of the Institute.

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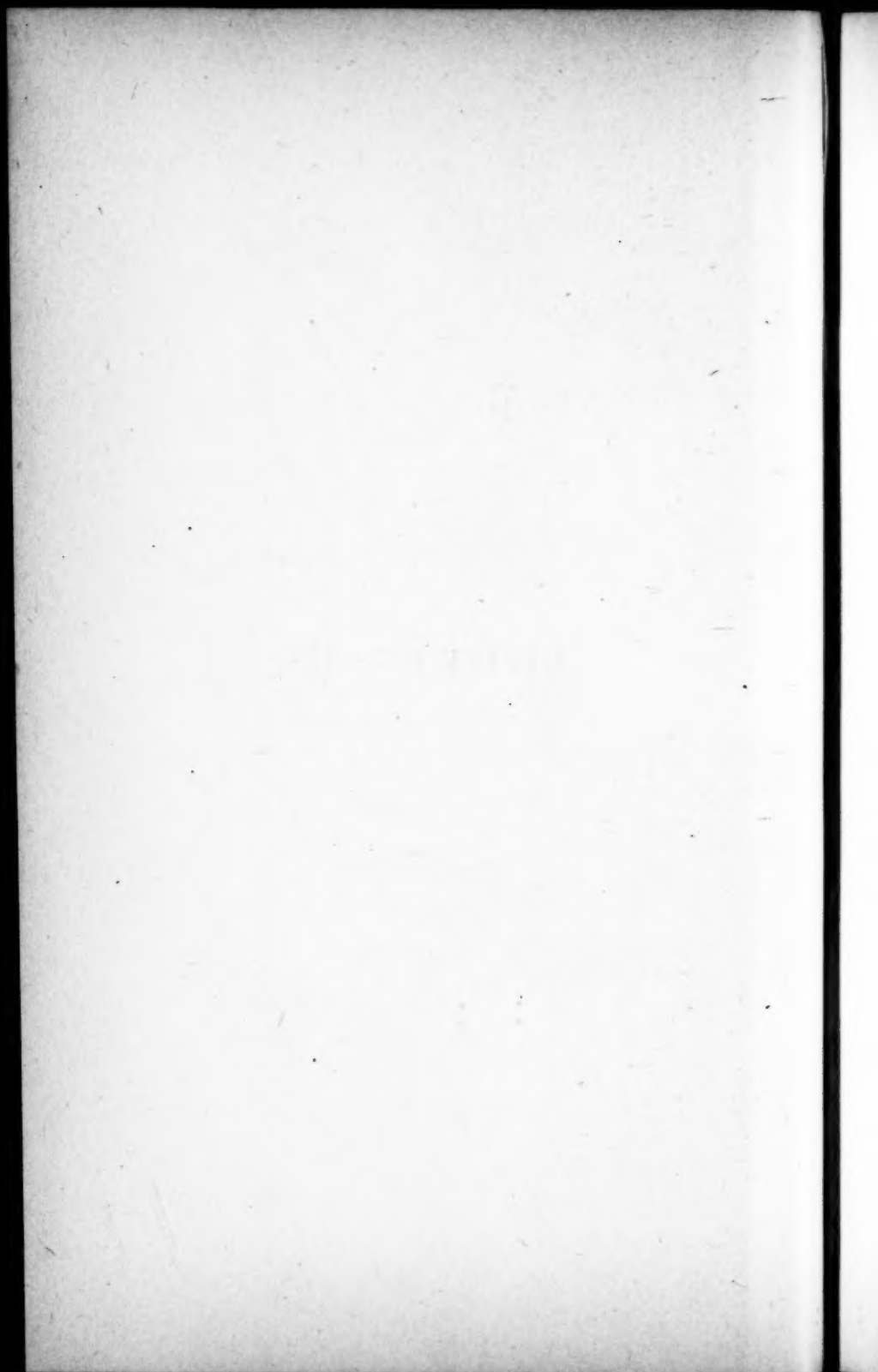
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ADDRESSES.



I.

THE PUBLIC SCHOOL AS AN INSTRUMENTALITY OF SOCIAL ADVANCE.

BY E. BENJAMIN ANDREWS, D. D., LL. D., PROVIDENCE, R. I.

[The following report somewhat condenses the address, but omits no essential point.]

The poverty in the world is a grewsome fact. No other phase of our life seems to me so sad. Every tenth child of Adam dying in New York city is buried at the public expense. In every great city in the world it is much the same. Each contains caravans of people, not specially dissipated, indolent, or thriftless, who are poor, very poor, never free from fear of want, doomed for life to the alternative of hard labor or starvation,—often no real alternative either, because they cannot find the work,—people as thoroughly cut off from all means of culture, as completely precluded from the rational living of life, as were the Helots of old Sparta.

“What profits it,” asks the late Professor Huxley, “What profits it to the human Prometheus, that he has stolen the fire of heaven to be his servant, and that the spirits of the earth and the air obey him, if the vulture of pauperism is eternally to tear his very vitals and keep him on the brink of destruction?” Huxley says that “if there is no hope of a larger improvement in the condition of the greater part of

the human family, he would hail the advent of some kindly comet to sweep it all away."

Henry George says: "It is my deliberate opinion that if, standing on the threshold of being, one were given the choice of entering life as a Terra del Fuegan, a Black Fellow of Australia, an Esquimaux in the Arctic Circle, or among the lowest classes in such a highly-civilized country as Great Britain, he would make infinitely the better choice in selecting the lot of the savage."

And John Stuart Mill, so sober, so judicial always, says: "If the bulk of the human race are always to remain as at present, slaves to toil in which they *have* no interest, and therefore *feel* no interest,—drudging from early morning till late at night for bare necessities, and with all the intellectual and moral deficiencies which this implies—without resources either in mind or in feelings—untaught, for they cannot be better taught than fed; selfish, for all their thoughts are required for themselves; without interests or sentiments as citizens and members of society, and with a sense of injustice rankling in their minds, equally for what they have not and for what others have; I know not what there is which should make a person of any capacity of reason, concern himself about the destinies of the human race. There would be no wisdom for any one but in extracting from life, with Epicurean indifference, as much personal satisfaction to himself and those with whom he sympathizes as it can yield without injury to any one, and letting the unmeaning bustle of so-called civilized existence roll by unheeded."

With the tenor of these utterances, I for one certainly agree, and no doubt nearly all are with me in this. Now premising that extreme poverty and the existence of a parasite population, a submerged tenth, are inseparable parts of the same phenomenon, let us seriously raise the question whether this misfortune can possibly be done away. Is there any means short of a miracle; is there any miracle workable by man, that can make the curse remove? The very question, I know, provokes a smile from many; yet it is in no wise a ridiculous question. The insufficiency of Mr. George's or any other anti-poverty prescription should not convince us that the abolition of poverty is a dream.

It will be seen that the question of annihilating poverty is one with the question of elevating poor people's standard of life. Speaking of the poor as a class, one may say that they are poor because they are willing to be so, or rather, because they are not willing to use the means necessary to effect for themselves a rise. And they lack this resolution because they lack proper pride, ambition, love of possession and power; in other words, have too low an idea of the sort of a thing a human being's life ought to be. They stay down because, while unhappy in many ways, and fretting at this or that detail of their situation, they feel no vigorous inner protest against the general level or quality of their condition on the whole. It is not meant that every individual poor man who might vigorously wish and vow to do so can rise, though this is more nearly true than most suppose. What is asserted is that the indigent classes taken

together fare as they do, practically for the sole reason that they have no arousing wish for any better fare; or, recurring to the old phrase, because their standard of life is too low.

The laboring masses can, within large limits, have, in remuneration for their toils, whatever they unitedly demand. Were all hands to stand together solidly for it, a general rise in wages of several per cent. could, in prosperous times, be enforced. If any employers then were unable to go on, such would give up business, leaving all the producing to be done by those who were abler or better situated. If the increase in wages were not very great, it might take place without any addition to the cost of goods, employers saving by better machinery and economy the extra sums paid for labor. If the gain in wages were great, prices would advance, the wage-workers being better off at the expense of the whole consuming community.

Why do not laborers stand together thus and secure better pay? For the simple reason that a large section of them—the “scabs,” as they are called—having no high idea of what life should be, are willing to work for almost any wages that may keep them from starvation. It is this readiness on the part of so many to accept a dog’s life—the crumbs, the dirt, the kennels—that worsts labor, wholly or partly, in all its battles. Trade unions endeavor to reduce the evil, and would do so if all craftsmen would join and faithfully execute their pledges; but they do not do so either.

One sees from this point of view the perfect justice with which our workingmen wish immigration restricted, especially that of the Chinese. Those

people have a notoriously low standard of life, as any one may assure himself who will go through the Chinese quarter in San Francisco. They live like rats, in cellars and in tunnels, which they have dug far out under the streets; damp, dirty, unventilated, making you at every step, think of Dante's progress through the infernal regions. Yet so deft are those Mongolians at all arts and crafts, that were they permitted to land at pleasure, American workmen on the Pacific coast would speedily be either driven out or forced to come down to the degrading level of Chinese life. That, not even our poorest Americans are willing to do. Far down as our lowest American standard of existence is, it is not yet so low as that of the Chinese, but there is evidence that it is sinking, and it is certain to sink lower and lower if it does not rise.

I have dwelt thus at length on the idea of a standard of life, illustrating it in various ways, because, when that idea is mastered, reasoning in this branch of sociology becomes easy, while if that central notion is not grasped all reflection involving it is misty and unsatisfying.

It is now time to inquire how it is that a high standard of life, being entertained by a population, becomes an anti-poverty specific. By what means would it, if present, rid us of our submerged tenth, and render workers for wages relatively independent? How can an idea or an ideal effect so much?

The bettered ideal of life would take effect by eliminating that weak, parasitic population to which reference has been made. Could we but found a powerful sentiment, universal throughout the labor world, that a

tolerable human existence requires about so many and about such and such of life's comforts, and that an existence with less or lower resources is absolutely intolerable, such a conviction could not but serve as a powerful check upon parenthood among the poorest. Striving upward themselves, men and women would be unwilling to undertake the work of parenthood when it was clear that their offspring would be condemned to an existence below the standard. For instance, how many American children do you imagine would be born even now, low as our standard is, if it were certainly known that all American children must live or die as the Chinese do in San Francisco or in China?

"Poverty," says Stuart Mill, "like most social evils, exists because men follow their brute instincts, but society is possible because man is not necessarily a brute. Civilization in every one of its aspects is a struggle against the animal instincts. Over some even of the strongest of them it has shown itself capable of acquiring abundant control. It has artificialized large portions of mankind to such an extent that of many of their most natural inclinations they have scarcely a vestige or a remembrance left. If it has not brought the instinct of population under as much restraint as is needful, we must remember that it has never seriously tried. What efforts it has made have mostly been in the contrary direction."

Mr. Mill here refers to the unfortunate inculcation by clergymen and other moral instructors of the view that technically legitimate parenthood, however horrible and however widespread its results, is still to be promoted as a preventive of social vice. Influence

of this sort—as if legal parenthood could never possibly be carried to a criminal extreme—has much to answer for. And so has the old military spirit, which, ever conjuring up wars, or in expectation of them, saw in a multitudinous population, especially if poor, so as to be easily turned into soldiers, a nation's chief treasure. Suppose all the educating forces which have hitherto wrought in this direction were to be turned in the other! A mere public opinion emphasizing the undesirableness of multiplying numbers among the poorest would work wonders; as it would also should there arise—what has never existed in any class save the poor themselves—a general desire that wages should be high. These observations are made, not to imply that the abatement of poverty will ever begin in the precise ways hinted at, but to illustrate the working of a high ideal of life, could it be once launched among the people.

The great question is, can it be launched, and if so, how? I name this as one question because the two parts of it can best be answered together. Of sociology considered from the moral or the philanthropic point of view, this is the question of questions. If this problem cannot be solved, then all social, all moral, all religious reforms, the most promising like the least, cannot but prove superficial, leaving our wretched humanity after all practically just where it now is. The single tax, socialism, even the Salvation Army crusade—far the most promising reform now on foot—will be vain.

So far as I know, only two real efforts have hitherto ever been made to get at and drain this fountain of

social woe. Of those two, Plato and Stuart Mill were the authors, and—it is worth noticing—both agree that the end can be accomplished only through means more or less artificial. The parasite population will never depart of its own mere motion. Plato's remedy was thorough and direct, but chimerical. He would permit no children to be born, or at least to live, save from a select number of perfectly healthy and perfectly moral parents. Except in Utopia or in an artificial republic like that of Plato's dream, one sees no way for executing this scheme.

Mr. Mill is far more practical. "For the purpose of altering the habits of the laboring people there is need," he says, "of a twofold action, directed simultaneously upon their intelligence and their poverty. An effective national education of the children of the laboring class is the first thing needful; and, coincidentally with this, a system of measures which shall (as the Revolution did in France) extinguish extreme poverty for one whole generation." Even if the masses are schooled, he says, "improvement is doubtful unless means can be contrived of raising the entire body to a state of tolerable comfort, and maintaining them in it until a new generation grows up."

To effect this part of his main object, Mr. Mill suggests two resources: One, a great national measure of colonization, at once removing to the colonies and establishing there as many as possible youth of the lower population; the other, the setting apart of all common land hereafter brought into cultivation for the establishment of a class of small proprietors. In fine, Mr. Mill would first educate the masses, and then

settle the poorest among them in colonies, at home or abroad, where special promptings to thrift and character would work upon them, forcing poverty, as it were, to disappear for a time; his hope being that this period of artificial betterment would radically elevate the standard, so that neither the people immediately benefited nor their descendants would ever relapse into the old, degrading indigence.

This scheme, in both its branches, seems to be intrinsically feasible, and it is interesting to note that General Booth has taken it up and to some extent realized it as a part of the Salvation Army campaign. But, to effect by it so much as Mill wished, would require its application with a thoroughness attainable only by the aid of vast public resources and the public coercive authority, either of which, I fear, it would be useless to attempt to obtain, now or in any proximate future. The colonization factor in Mill's plan for elevating the poorer poor must therefore be relinquished.

Notwithstanding this, I am impressed with the chance of working out the central purpose of Mill's plan, and of doing this for the most part in Mill's way. Only, as we give up his colonization project, we must magnify considerably the office which he meant education to fill. This, ladies and gentlemen, is the point to which all the foregoing observations have been tending. By rightly modifying and improving our public educational system, we can make education itself, without colonization or anything of the sort, a force to uplift the masses' standard of life. Nor are the changes necessary to render our public school system efficacious in that social office at all

of a radical character. Most of them are only still further extensions of improvements already introduced, and recognized on all hands as desirable.

One thing that will have to be insisted on is compulsory school attendance during children's school years, whatever these are. Laws to effect this already exist in most states, though usually ill enforced. We must enact such where necessary, and then everywhere execute our laws by a rigid and kindly use of truant officers. From two and a half—not too early an age for entering the kindergarten—until sixteen every healthy child should be in school ten months each year. This is not an extravagant demand, nor will any child consider it so if the other parts of the school system are such as I am going to describe.

The kindergarten must be everywhere made part of the system, and its methods, so far as applicable, must be kept in use throughout all the later school years. The effect of this would be surprising,—not only the mental effect, but, still more, the moral. We have learned of late years that God has more ways than one for unlocking the human intelligence, and that among His happiest methods for this are the kindergarten methods, of learning by doing, and of coming in contact with things themselves instead of descriptions. The determination to be accurate, for instance, which Cardinal Newman well characterized as “a great part” of true education, first comes and comes best to many a child in trying to make something according to a rule or a model. “Saw to that line, but don't saw it out.” “When you can do that, saw out the line so that neither part of the divided plank will show

a whit of pencil mark." "Saw plumb." "Plane that edge straight." "File that surface flat." From such problems, sedulously wrought out, minds of a certain type get a far better educational start than book-learning could ever give them. All these operations are at the bottom mental, hand and eye being only auxiliary in them; and when the mind has been thus roused with the joy of attainment, it easily turns to books, to mental tasks that are abstract. The passing of all children through the kindergarten means the induction of them into the world of ideas by this natural and pleasant path. The improvement in mental training which would thus result is immense and indescribable.

The moral advantages of kindergarten methods are no less marked. Kindliness, deference to others, careful regard for rights, as well as manners,—which stand so near to morals,—are incessantly enforced. The results are more than gratifying. Not only do most of the little ones themselves acquire a beautiful unselfishness and sweetness of temper, but each becomes in its own home a missionary force. Cases are not rare where a single child, three or four years old, trained in the kindergarten, has reformed the house habits of an entire poor family; the mother first, then the elder sisters, then the rude big brother, and last the coarse, grimy, dull father, coming to be personally cleaner, tidier about the house, less piggish at table, less animal and more human, cultivated and moral every way. No one can witness these fruits of kindergarten instruction in any poor man's home without saying, "Let the good work go on."

But there are very many other ways in which the intellectual and moral appliances of American schools can be improved, and every such chance of betterment must be utilized to the utmost. Not to enter upon the details of so great a subject, I would urge the carrying out of all those reforms on the desirableness of which educational authorities are agreed. We need better coördination of grades with grades. At the same time increased spontaneity in pupil and teacher both is desirable; less of mechanical, enforced, treadmill procedure. Politics should be abolished in constituting school boards; abler superintendence provided, especially in smaller centres and in the country. Above all, there should be a higher level of teaching talent all along the line, but especially in primary and grammar schools. This requires higher salaries. A system of pensions for faithful teachers when superannuated would also help. I wish it might come to be generally felt, for it is true, that there is no nobler calling possible for men or women, however high their mental powers and cultivation, than that of teaching boys and girls in the people's schools.

More important than aught intellectual is a higher, more earnest type of moral instruction and influence in our schools. We, of course, already insist that teachers shall not be immoral; and the teachers throughout this country are certainly for the most part persons of exceptionally high character. But we have not yet seen the possibility or the necessity of making every school a theatre of systematic and positive moral training. One reason for this neglect is doubtless the close alliance of morals with religion.

As the schools cannot teach religion, it is thought that they should not endeavor in any positive way to inculcate morality. But this need not follow.

"The two subjects on which the professors of every creed, theological and anti-theological, seem least anxious to differ, are the general substance of the Moral Law, and the character of the sentiments with which it should be regarded. That it is worthy of all reverence; that it demands our ungrudging submission; and that we owe it not merely obedience, but love—these are commonplaces which the preachers of all schools vie with each other in proclaiming. And they are certainly right."

—A. F. Balfour. *The Foundations of Belief*.

These considerations, so true and important, do away entirely with the supposed difficulty of positive moral instruction in our public schools. There are hardly any items of concrete morality in which the Catholic does not agree with the Protestant, the different sects of Protestants with each other, the Jew and Mohammedan with them all. Atheists, if any such there really are, would concur in the same code. We all wish our children to be upright, hating lies, sweet in temper, reverent, lovers of country, respectful to their seniors, obedient to their parents and teachers, believers in righteousness, firm in purpose, devoted to the public good.

To this end of perfecting character in the pupils of our schools, we should insist not only upon merely moral teachers, but upon special beauty, strength, and balance in the character of all teachers. The heads of schools and of classes should be men and women

of eminent and positive virtue, such that the very association with them on the part of their pupils will be a stimulus in everything noble.

Then, further, a regular line of systematic moral teaching covering the virtues enumerated just now, and a great many others, in short, all the cardinal forms of conduct, should be carried through the school years. There is no time to sketch this course in practical morals with any fullness; nor is it necessary to do so. The point to be insisted upon is, that the school should be made the most perfect piece of moral enginery that can possibly be created with the resources at our disposal, which resources are a great deal more copious than one would at first suppose.

Turning now from the mental and moral influences that ought to be impressed upon every child and young person at school, to the physical influences which should surround them at the same time, I would urge that every school-house should be made a veritable palace. Let us have the best of ventilation and light, and sufficient and equable warmth; and in all other particulars let us make every school-room as comfortable as it can possibly be, so that every moment of presence in school shall be for every pupil one of perfect physical delight.

Not only the merely physical circumstances are to be made complete, but the æsthetic as well. In the study-room, teaching-rooms, halls, and stairways, every feature should be made to reflect beauty. Let every niche anywhere available contain a bust or a statue, perfect in its kind, and linking the thought of the present with the noblest life of the past. Let choice

paintings cover every wall. The building itself should have complete architectural style—a feature which need not involve the costliest material, and which can be carried out with no greater expenditure of money than is needed to put up the unsightly piles which now serve as school-houses in too many localities.

Outside the school-house all should be in keeping with the splendor inside. A considerable park, perfectly laid out and tended, ought to surround the building, containing ample play-grounds. Playing-grounds should be insisted upon even at the expense of the park. Let flowers fill every available bit of soil about the school-premises in summer, and let a conservatory provide a goodly supply of them for the adornment of each class-room in winter.

The pieces of art could be made helpful intellectually as well as æsthetically; they might be so selected that history could be taught from them, and also to a goodly extent, geography. There is no better brief text for a course in the history of Greek philosophy than Michael Angelo's painting, "The School of Athens." Partly the paintings and partly the flowers, could serve as the basis of an excellent rudimentary course in botany. On these features, also, it is not necessary to dwell further, as the hints dropped suffice to set forth the substance of my meaning.

Lastly, a lunch, frugal, hygienic, elegant, should be served for all the pupils each day, at the public expense. Such lunches are necessary, apart from my special contention, as a matter of health. This consideration has led the school committee of Boston to

provide low-priced lunches for pupils in some or all the Boston high schools, thus almost realizing my thought, even in the matter of expense. A beginning has also been made in Cincinnati. If a proper lunch during the day is necessary, as it certainly is, for the due ongoing of the pupil's work that day, I see no reason why it should not be provided at public cost, as much as the school books. I say it *is* necessary. If not provided suitably, all the pupils will eat cold food. Part of this will consist of cake, scraps, and other unhygienic articles brought from home. The rest fourth-class caterers, lying in wait near the school-houses, will provide, still worse in quality, and at extortionate prices. It is better every way that provision for a noon-day refecton for teachers and pupils should be in the hands of the school authorities.

This is, I repeat, the better course, even if no further reform is sought. It is desirable under the present system. But our experience in kindergarten work has shown us that there is great cultivation, and even stimulus to morality, in the proper eating together of a meal by a lot of young persons, under the direction of cultivated superiors. Human beings come specially and helpfully near to one another when they eat in common. In all ages eating in common has been a powerful means of amity and brotherly love. This principle underlies the Lord's Supper itself. It also forms a large part of what is good in modern club life. A family would hardly seem a family did its members not often come together about the same table.

Such, ladies and gentlemen, is, in outline, the system of education which I should be glad to see built

up throughout the United States of America. From such a system, I believe, would proceed an elevation in the people's standard of living which would result in the abolition of poverty. Fourteen years of school life of this sort on the part of all our population, would change the national conception of what it is to live. It would multiply intelligence and morality, so that the toilers would stand together for all their just rights. Trained in the way described, people would be unwilling themselves to descend to that level where so many wage-earners and others now are, and they would also be unwilling to undertake parenthood, when there was any serious risk of their descendants sinking to that level. What this would mean for the general weal of the laboring population, we have seen in the earlier part of this lecture. Redundant and feeble population would cease to exist. Those remaining would unite to secure their dues. In the, I should hope always very rare, contingency of a strike, there would be no "scab" underbidders for work. Wages would all along the line be as high as the conditions of industry would admit, and could not but afford a decent plenty for all. Absolute equality in human conditions is not possible, nor is it desirable; but the removal of degrading, coarse, dehumanizing poverty, is both desirable and possible. It can be secured by the means pointed out.

This benign and evangelical result might be brought to pass without the slightest clash between labor and capital, occasioning no cataclysm or break socially, and not involving even the introduction of any new principles. If any one says that the plan is social-

istic, I triumphantly reply that it is no whit more socialistic than the present system of public schools. Nor would wealth suffer by the *régime* outlined. On the contrary, it would be immensely increased. The ignorant work population is ever the least productive. The millions upon millions now spent for charity toward the poor would be saved. The receipt of charity by poor people always makes them dislike the rich, and this dislike would be removed by the means recommended. Such lack of gratitude seems at first an anomaly, but it is based upon a certain right thought. The poor have a dim, rational surmise that charity ought not to be necessary, and that things are out of joint when they have to receive it. Could we do away with the now unavoidable evil of charity-giving and receiving, that consummation alone would pay all the cost involved in the experiment.

What hinders? Very little hinders, except the apathy of the majority of our people. To work the scheme requires union and some enthusiasm. I have hope that the study of it may result in both. Some may say that the schools are not good enough to be put to this high use. True, they are not now good enough. Precisely the demand is that we shall take hold and make them good. If all would vote, work, and agitate for the very best school system possible, the schools would speedily become, if not all that we could wish, certainly perfect enough to render a success that reform which we have been studying.

I dare say that, when first announced, the system of education desiderated would meet with considerable opposition in the Roman Catholic church. I

should hope, however, that when fully understood it would not do so, but would evoke instead the hearty support, not only of the laity of that church, which I am sure it would do, but also of the hierarchy. What has been described is, of course, a system of public education, of education for the children of all, irrespective of religious belief. In such schools religion cannot be taught. No functionary of a church can, as such, officiate in them. The teachers, drawn impartially from all religious bodies, must, as teachers, represent no religious body. This we know traverses the Catholic theory, which is no doubt the proper theory if we could have an absolutely ideal system of education. If we were all of one faith and under an identical religious establishment, and were certain to be so always, I believe we should wish religious teaching to form part of the child's education from the earliest years, and to be imparted in most cases by the very same persons who taught the secular rudiments. In the actual hurly-burly of religious belief and unbelief, however, this cannot be, and no Catholic is to be blamed for regarding such impossibility as, so far forth, an objection to the present system of public schooling in America or to the better one for which I plead.

But I seem to see how it could be reduced to an inconsiderable objection. Let the priests, with their assistants, and of course all other religionists equally, establish their houses for religious instruction, if they wish, on the very edge of the lawn or park surrounding the school-house, and there let them, just before school and just after, instruct the children of their

respective flocks, accompanying the secular lessons, day by day, with religious teaching calculated to blend the two into one indivisible mesh-work of influence. In connection with the positive and unremitting inculcation of morality within the school itself, this could not but contribute to the development of character in a way fairly satisfactory to the most intense devotee of religious education. I believe that it would aid Catholicism in a marked degree, instead of hindering. To many Catholics, assuredly, the system of separate schools seems unfortunate, as not only unpatriotic, distrustful if not scornful of a national institution, but as distrustful of Catholic truth itself, as if this could not live without special shelter. No doubt many leave the Roman fold for this reason.

But suppose there would be, from the Catholic point of view, a real loss, in one way, from joining in the order of public education we have set forth, the incalculable gain that must come to the great commonalty of our fellow-men, in which that church is by all its professions, principles, and traditions interested, would much more than make good this loss.

II.

THE RELATION OF MANUAL TRAINING TO CERTAIN MENTAL DEFECTS.

BY GEN. FRANCIS A. WALKER, PH. D., LL. D., PRESIDENT OF
MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

The full title of my paper is Manual training as an agent in the diagnosis and treatment of certain mental defects ; but that statement exaggerates the importance of the paper, since what I shall have to say on the subject is merely in the nature of suggestion and inquiry. I have, in fact, no results to announce ; no formed conclusions, even, to express. My mind has been drawn within the last few years to certain phenomena which appear to intimate the probability, first, that mental defects, seriously interfering with progress in study and with success in the affairs of life, may exist without being suspected by parents, teachers, or play- and school-mates ; secondly, that such defects do in fact exist far more frequently than is popularly supposed. Brought to these conclusions, it has seemed to me that manual training—or the practice of the mechanic arts as a means of instruction—while useful in the case of students of normal minds and of the best abilities, may have an additional and most important use as an agent, first for discovering, and then for treating, these defects. Let me ask your attention,

somewhat at length, to incidents which have suggested the probability that parent and teacher and play- or school-mate have often to do with wholly unsuspected defects of mental constitution and organization.

A few years ago I was called upon to act as the chairman of a committee to examine candidates for West Point, in one of the congressional districts of Massachusetts. The thirteen candidates were subjected to the usual examination for physical soundness; and all satisfactorily passed the test. When we came, however, to the test of color-blindness, a young man whom I had remarked as one of the most spirited, intelligent, and fine-looking of the group, advanced to the table and threw the skeins of colored worsteds into groups so absurd as to seem actually impossible. One moment sufficed to show that he was wholly out of the competition and entirely ineligible for military service. Here was a young man, evidently of more than usual intelligence and ability, who had gone to the age of seventeen or eighteen without any suspicion on his own part that he had not the normal sense respecting color. His parents and the other members of his family from childhood had been accustomed to observe him in his dealings inside the house with colored objects; his playmates had doubtless on countless occasions made reference to the color of objects; and yet he had gone through all this, day after day and year after year, without having his suspicion excited that what they saw he did not see, and he had taken the trouble to prepare himself for an examination the results of which might affect his whole life, without

the faintest apprehension of his disability. I remember to have heard of a naval officer who went through the war and was afterwards discharged from the service for a long unsuspected color-blindness which was almost total; yet for years he had been dealing with color signals and colored flags and ensigns. It is well known that the color tests introduced by boards of railroad commissioners in several states have resulted in throwing out not a few locomotive engineers of large experience who had never discovered or suspected their deficiencies.

Take another instance: a gentleman came to my office to introduce his son as an applicant for admission to the Institute of Technology. The young man had received an appointment to the Naval Academy at Annapolis; had passed the text-book examination; had passed the ordinary physical examination; had gone through the test for color-blindness; and then it was found that an object which he could see distinctly with one eye at the distance of twenty-seven feet had to be brought within eight feet to be seen at all with the other eye. During all his childhood and boyhood he had never for a moment suspected the existence of this defect. Let me recite still another case. A lady of my acquaintance had very charitably taken into her household, as a servant, a young woman who was subject to severe nervous disorder. She could get employment under no ordinary circumstances; and the lady I refer to had undertaken to carry a part of her burden by employing her. After the lapse of some weeks, this lady, who had often observed the servant very closely and curiously when

engaged at her work, especially while sewing, broke out with an exclamation, "Jane, do you really see anything?" The girl looked up in great surprise. "Why, yes, I see perfectly well." Her mistress rejoined, "I do not believe that you see anything as we see it." An examination by an oculist followed; and it was ascertained that the girl's entire disorder proceeded from eyes that were simply a mass of defects and distortions. With treatment of her eyes, the nervous affection in time ceased. I related this to one of the most distinguished medical men in New York, for many years a professor in the College of Physicians and Surgeons, who rejoined, "There are many such cases. My son, a captain in the United States army, for years suffered the greatest agony from pains in his head and the back of his neck, before he discovered that the whole trouble was due to defects of vision."

I might go on for a long time enumerating instances which have come under my observation of a similar character; but what has been said will suffice to justify the inquiry, whether, if such defects, in such degrees, can exist in respect to matters so objective and so completely open to observation and to examination, is it not probable that defects of mental constitution and organization, of the gravest nature, are found in every school-room and in every large family; and that much of what the parent or the teacher takes to be the result of indifference or wilfulness or neglect, is due to mental distortions, perversions, obliquities, lesions, and breaches of continuity, which have as distinct and decided an effect in preventing the proper and normal action of the child's mind upon what is sought to be

presented to it, as would the most objective deficiencies and injuries to the organs of sense. If parents and teachers and play-mates and school-mates can fail, through years, to see, or even to suspect, the existence of color-blindness, for example, is it not possible, and even highly probable, that defects more deeply seated and of a more obscure character are the cause of no small part of the failures of the schoolroom?

Here is a child whose sense of hearing is seriously impaired. It is known that such deficiencies have existed for years without being suspected. In connection with the preparation of this paper, a Boston physician has told me of a case recently coming under his knowledge where a young man had gradually become almost totally deaf through the slow process of the disease called adenoids, without his father, a practising physician, suspecting the existence of the trouble until a late stage of the deafness had been reached. Now, in the case of such a child, whatever is said loudly and distinctly is heard. The moment the teacher's voice drops below a certain point, or her back is turned, or her speech becomes hurried and confused, the child loses all or a part of what is said. Some thing he makes out; perhaps by suggestion from what he has caught, perhaps by observation of the teacher's lips or gestures; some other thing he drops entirely; a third thing, still, he gets wrong. The result is partial failure in his work. He does not understand the true cause. His teacher does not suspect it. In the same way, there must be instances of mental defects where a more than usual effort on the part of the teacher, a

more than usual degree of attention on the part of the pupil, enables the current of thought to jump the broken wire and pass to its object; but any slackening of effort on the part of the teacher, or of attention on the part of the pupil, allows the current to become dispersed and to remain without effect.

It is not for a moment supposed that the thought above presented is not familiar to all students of the mind and all teachers of youth. The only contribution, if any, which I can hope to make, is in urging the consideration that such mental defects as correspond to the defects in the organs of sense of which illustrations have been given, are vastly more frequent than we have been accustomed to believe and demand greater attention from us in dealing with individual pupils; and secondly, that we have in manual training an agent for a diagnosis of some, at least, of these defects and, though doubtless in a lower degree, for treating them. We go into an orthopedic hospital and our very souls are torn with the spectacle of distortion and perversion and deformity which we there witness on every hand; but we comfort ourselves by saying, "Thank God! it is only one child in a hundred who is thus afflicted." For my part I believe that the cases of mental distortion, perversion, and deformity are far, far more frequent; and I cannot help believing that it is to such unsuspected disabilities and infirmities of the pupil that we owe a very large part of the failures of the schoolroom which pass for instances of heedlessness, wilfulness, and even positively bad purpose.

If I am wrong in this—as I easily may be—then I have occupied your valuable time and attention to no purpose; but the matter has so strongly forced itself upon my thought as to compel me to give utterance to it here, and to ask this great body of practical teachers, as well as students of pedagogics, whether the subject is not deserving of special investigation and inquiry.

If, indeed, it is reasonable to believe, that defects of mental constitution and organization, corresponding to defects in the organs of sense, do exist in regard to any large part of our school children, then it seems to me clear that we have in manual training, so-called—that is, the systematic practice of the mechanic arts in connection with drawing, as a means of school instruction—a very important agent, at least for their discovery.

If to the traditional studies we add manual training, we have not only another test of application and capacity—a thing in itself of great importance, inasmuch as, by bringing in a new kind of test, we may largely correct the errors of the test afforded by text-book studies merely—but we have a test peculiarly suited to bring out the cause of any degree of failure in the performance of work. In the first place, the results of good or bad work with tools and upon materials can be measured and gauged and “sized up” with an accuracy which is not attainable in estimating the character of the work done in most of the traditional studies of the school room. The teacher can see exactly in what degree the child has failed, and the child can see it for himself, which

is far from being always the case with recitations and examinations. Not only so, but the teacher, as I believe, finds out much more closely the cause of failure in such work. If there is any tendency to misunderstand instructions and directions; if there are any defects in the child's organs of sense or any broken wires in his mind, a penetrating teacher ought to be able, by repeated experiment, to ascertain the fact. The objective character of the work, the closeness with which the results can be measured and gauged and criticised, and especially the aid derived by the teacher from the fact that the pupil is almost invariably desirous, and desirous in a high degree, of doing his shop work perfectly, all these combine, it appears to me, to make certain that a child will not pass through any very long course of study, in a school where such exercises are systematically conducted, without the discovery of any physical or mental defect which may exist. I do not mean to say that in all cases, or even in the majority of cases, the seat of the trouble will be precisely hit upon; but at least, enough will be learned to give the pupil fair warning that he does suffer from some disability which he must make special effort to overcome; at least, enough will be learned to put pupil and teacher in a better relation of mutual understanding and mutual respect.

Should the manual training exercises disclose defects of mental constitution and organization, I believe that these same exercises may be used by the teacher most directly and beneficially in the treatment of such defects. Even though the teacher should not be so gifted as to be able to make the pupil's work,

discover the cause of total or partial failure, or of special weaknesses or infirmities, I still believe that the mere practice of the mechanic arts is the best possible regimen and gymnastic to which a mind in any degree falling off from the normal, or suffering from any perversions or deformities, can be subjected. What orthopedic surgery is to the body, such, I believe, manual training in childhood is to the mind. I care comparatively little for its influence upon eye or hand. Its chief work in my view is educational; and in that educational work I place foremost its power of rectifying the mind itself, of straightening the crooked limb,—so to speak,—of strengthening the weak joint, of healing the lesion which, if not cured, will proceed to deep and irreparable injury. Not one of us but has seen seemingly hopeless cases of deformity and weakness in childhood, completely cured by the splints, the massage, the fomentations, and the heroic surgery of the orthopedist. As I write, I recall the images of schoolmates and playmates doomed apparently to hopeless suffering and weakness, who are, to-day, by reason of such treatment, straight, vigorous, and comely beyond the standard of their race. A benefit similar, at least, in kind, can, I believe, be wrought, in the case of many children who enter our schools suffering from inherited and acquired defects of mental constitution and organization, by the judicious and intelligent use of the mechanic arts as educational instruments. I am not here and now speaking for the more gifted and fortunate of our pupils, though entertaining the strong conviction that manual training properly applied in schools, freed from

the crudities and errors incidental to the introduction of any new system, will prove of great educational benefit to the brightest and best of our scholars. I am speaking for a great body of children who, but for this new instrument of education in the hands of intelligent and skilful teachers, may go into life with serious mental defects uncorrected, and even unsuspected; defects which will grow more serious and more hopeless with the progress of time and with experience of life.

III.

THE RELATION OF FATIGUE TO SOCIAL AND EDUCATIONAL PROGRESS.

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Fatigue is of two kinds, slight or normal, which disappears after reasonable rest and sleep, and excessive, or pathological, which does not. The former is necessary and healthful; the latter injurious, and the cause of varied diseases. They differ chiefly in degree, and are produced by the same causes.

It is a fact not questioned, that every movement of a muscle and every mental act, whether it be thinking, feeling, remembering, or the passive reception of impressions through the senses, is accompanied by some chemical change in the muscular or nervous tissue, or both. This change may be called a "wearing out," an oxidation or metabolism, and the worn-out material or ashes, as it were, is thrown into the blood, from which it is removed by the various organs of depuration, as the kidneys and liver. It is important to note that this debris of nerve and muscle is decidedly toxic to the various organs, and especially so to the brain. Its constant and prompt removal is necessary to preserve life, health, and happiness, and to the best work of muscles or mind.

THE CHEMISTRY OF FATIGUE.

The chemistry of these poisonous waste products is not well understood, but it is safe to say that among them are leucine, creatine, leukomaines, and lactic or sarco-lactic acid, tyrosin, and a substance with effects like ptomaines, which are mostly, in some way, changed to urea, and then excreted by the kidneys. Now we may inquire what are the causes of, and the conditions in, fatigue?

Any movement of mind or body, because it introduces some of the above materials into the blood, and because it removes, by oxidation, a portion of the brain always, and when a muscle is moved of the muscular tissue, also, produces fatigue. Three conditions always exist. 1.—Deleterious material in the blood. 2.—A changed, abnormal condition of the brain cells, the nuclei and protoplasm of which are much different from the rested cell. 3.—There is general fatigue of the entire body, caused by toxic materials in the blood, which also hinders nutrition of the wasted cells of the nerve and muscular tissue, and gives a sense of weariness. 4.—There sometimes exists also a local accumulation of waste products in the tissue which produced them, as a muscle, and this is the case when the labor is rapid or violent. Since the brain is the motive power, all fatigue is brain fatigue; that is, there can be no fatigue in which the brain does not share, locally, in some centre. In all cases then there is local fatigue of brain, or muscle, or both. When these conditions exist to a small extent the fatigue is normal, healthful, and the recovery takes place quickly. When they are carried

to a great extent, the system, as a whole, is weakened and permanently injured in one or more organs or tissues.

In cases of long-continued and extreme fatigue the condition of the system resembles that of typhoid fever in its weakness, without, of course, the characteristic lesions of that disease. But fever may exist, and also what is known as irritable heart. Many times the fever of fatigue is erroneously classed as abortive typhoid, bilious, etc. Most cases of nervous prostration are caused by fatigue of mind or body.

Incidentally, it may be stated that the kind of food has much to do with the ability to endure fatigue, and especially brain work. According to good authority, the great dietetic sin of the American people is their gorging themselves upon enormous quantities of potatoes, a food of little value, and one which taxes the digestive organs from its mere bulk, and in many ways induces dyspepsia and neurasthenia. Nerve specialists will thrive while we are a nation of potato eaters. We should eat more largely of proteids, such as meat, milk, and eggs, which make brain and muscle.

The waste products in the blood not only poison tissues and glands by their presence, but prevent the oxygen of the blood from performing its function. When a man or animal falls dead from over-exertion, it is because he is poisoned to death by his own waste products, which were formed faster than they could be eliminated. Fire engine horses last but a few years, because at every run, the above conditions exist to a great extent. The sudden beginning of so violent exertion, before the various purifying glands can get

to work, is dangerous. When all these get well to work, we say the man or beast has his "second wind."

The above facts prove that fatigue is very largely general. Labor of mind tires and weakens the whole body. A student, after an examination, has much less muscular strength than before. The mind is far less vigorous after any muscular labor. To try to do both mental and physical labor, in one day, is to lessen the quantity and impair the quality of both, and also to invite a collapse of the nervous, digestive, or other organs, in serious disease. The less labor a brain-worker performs, before his daily task, the better. A small amount of exercise after it, not too violent, is right, and needed to produce activity of the various organs which purify the blood. The test of a proper amount of work is the condition in the morning. If one rises tired, it means over-work, and "Morning tire," as it is called, brings nervous prostration or other diseases, if long continued. Hard work of either brain or muscle, alone, is much less injurious than the severe use of both, at once, or in the same day.

PHYSIOLOGICAL PSYCHOLOGY OF THE EMOTIONS.

It should be carefully noted that the feelings, and especially the emotions, induce fatigue most rapidly. Those which are violent, and those which are evil, when uncontrolled, as anger, jealousy, covetousness, consume the brain cells very rapidly and throw poisonous nitrogen compounds into the circulation in large amounts. It is probably true, as claimed, that each

feeling puts a different substance into the blood, for different emotions produce perspiration of different odors, and each person has an odor peculiar to himself, as the keen-scented dog knows, who follows his master by his odor. Be that as it may, good wholesome Christian emotions and feelings are very healthful, and but slightly fatiguing. On the other hand, we may all know how weak and prostrated an outburst of anger leaves us, or a severe trouble, borrowed or real. An Arab proverb says, "Hurry is the devil," and he might have added that worry is the twin. The fretter and scolder is very apt to be scrawny. Let us make this practical. The horse which is petted and well used can draw more and knows more than his ill-used companion. Not the whip, but kind words and carresses are what make the horse or the boy stronger, and willing to do his best. The cow, whipped or frightened, gives less milk. Wise dairymen allow no shouting to their herds, for the emotion of fear is very tiresome and unhealthful, both to man and beast.

On the other hand, to praise a person, to make him laugh, or do him a kindness, is to give him a dose of the best possible tonic. Under these feelings, the waste of tissues is reduced to a minimum, and the vital forces seem to build up to higher form of organization all the tissues, while the excreting glands are also made very active. We feel rested after a laugh, a word of praise, or a kind word, and we are made more healthy. The religious emotions and close thought are also very restful and healthful. Let us remember, to quote from good authority: "There is

no tonic like regular work of mind, nothing so sure to steady the nerves of the fretful and excitable child, as regular school work, in the hands of a real teacher."

THE ORDER OF MENTAL FATIGUE.

We have higher and lower faculties of the mind, and muscles with higher or finer functions. In general, the lower powers of mind and body are the first to develop in childhood, and those which develop latest in life, are highest in office, most important, that is to man as a spiritual and thinking being,—and are farthest removed from the powers of mere animals. Roughly stated, the order of development from infancy, is as follows: Perception, memory, reasoning, the esthetic nature, the conscience, will and religious feelings. The power of attention is constantly increasing until long after adult life is reached. In its full power, it means high development. The selfish nature develops very early, and while he is full of growing germs of noble faculties, it is true that from four to twelve, the average child is about as selfish as the average quadruped.

The grand law of fatigue, as related to the mind, is that the highest faculties are the first to weaken from general fatigue, and become dull, inactive, or useless. This fact is the premise of some startling and invaluable inferences. The finest muscles or those of highest functions, are the last to develop in the child, and the first to feel the effect of fatigue. For instance, the voice, whose use required fine muscles, shows its effects sooner than the walk. Continued attention to one subject cannot be given by a tired person for, being a high faculty, it tires among the first.

The will is one of the first things to feel the effect of general fatigue. A tired man is lazy, physically and mentally. His higher brain cells have "struck," as it were, for a holiday, and more brain food and time to eat it, so to speak. A man can see or hear with interest, long after he is too tired to reason or worship. Family prayers should always come in the morning, because man is more religious, and has more faith in God and prayer than he has at night. He enjoys saving a dollar by a sharp bargain long after he is too tired to admire a painting. He eats with pleasure a good supper, when the higher duty of being entertaining or going on an errand for his friend is a very disagreeable task.

Benevolence is a high faculty, and so, under this law, the liberal man of Monday-morning is quite penurious Saturday afternoon, and alas, sometimes his benevolent cells do not get their protoplasm and nuclei into good working order during the entire Sabbath. Joseph Cook is very wise to give his famous Boston lectures, which appeal to the highest faculties, Monday noon. If delivered Saturday or Sunday, the interest would be much less. If sermons could be preached Monday forenoon, after a restful Sabbath, the world would make wonderful strides in religious progress. It is more easy to interest a morning than an evening congregation, in religion. Among the higher functions of certain brain tracts, is that of inhibition. These tracts are called "inhibitory centres," and their function is like that of brakes on a wagon, or like the governor on an engine, or like that of a coachman who holds a tight rein when his spir-

ited team is going down hill, or along a crowded street. The effect of fatigue on these centres is seen very quickly in any prolonged effort. Take a wagon to the top of a steep hill, and let it go where gravitation takes it, with the thill or pole still attached, and you will have a good idea of what happens when these centres are fatigued. In general, self-control is lost, and the lower, the baser, and the more selfish faculties of our nature run riot. I will give a few examples and leave you to make many other applications possible.

Who has not seen a teacher or housekeeper so tired that she remarked, "I feel just like crying," with absolutely nothing to cry about? It means simply this, that the brakes were off, and the crying machine, so to speak, started up. In case of a tired man, perhaps his scolding cells will run away with him. A tired person is usually cross, stupid, and unreasonable. So are the night-walking carnivorous animals. Sometimes, however, it is the fighting, the giggling, or eating propensity which runs away with the person who is very tired. Whoever, for instance, hears of fights in the morning? Over-eating, also, is usually done at night. In short, the fatigued person is very sure to fly off on a tangent in one or more lines. In other words, his inhibitory centres have ceased to act; he has little self-control. Most crimes of all kinds are committed at night, when men are tired, ugly, and possessed of little judgment, comparatively, and less conscience. Boys who are allowed to roam abroad nights, when the higher centres of the brain are fatigued, and their moral and religious nature inactive, usually become

criminals. The rested boy or man can resist temptation, but the tired one cannot. His will and conscience are both too weak. Early retiring is a safeguard of virtue, for all ages. Early rising, before one has had enough rest and sleep, is, despite the old proverb, very injurious to the mental, moral, physical, and spiritual growth of the child.

FATIGUE IN SCHOOL.

The teachings of the science of fatigue are of inestimable value in the direction of education, not alone within the schoolroom, in the high school, college, and university, but outside of it. Popular belief is so diametrically at variance with the facts of science that one runs the risk of being considered visionary when he states the truth. But in the company of such men as Dr. Michael Foster of England, of Dr. Edward Cowles of the Somerville, Mass., Insane Asylum, and President G. Stanley Hall of Clark University, one has some courage to stand up under adverse criticism.

Most of us remember, that, in the dear old country schoolhouse, the teacher who was able to stand upon his or her feet, six hours a day, to walk up and down before the class during every recitation, was the one who was supposed to earn his money, and was usually re-engaged. The one who should sit very much, was counted lazy, shiftless, and undeserving of the fifteen or twenty dollars per month which had lured him to his fate. Even now, in some country school districts, and in some cities, the same views prevail, and, of course, education suffers thereby. And the poor

children, what of them? To stand up during reading, and many other recitations, was considered the proper method. Even now, this view obtains in many schools, especially in primary grades. And yet some people wonder why teachers break down and pupils dislike school. Let us bear in mind the grand truth that *every* muscular movement or continued tension of a muscle, throws into the blood some poisonous compounds, *always* formed when the muscles are used, from the metabolism of muscular tissue, and that these nitrogen compounds poison the brain, and make it incapable of performing its higher functions, and then these statements given will seem clearly, absolutely, and emphatically true.

It was a wise man who said that "one should never do anything standing that can be done sitting, and nothing sitting that can be done lying down." The teacher who stands when she can sit, to conduct a recitation, is weakening her intellect, destroying her amiability, self-control, patience, nervous system, and general health. For some years, I have made it emphatic that those for whose teaching I am responsible, must sit most of the time. The results are the happiest. The afternoon session, usually so valueless because the teacher is tired, cross, and stupid, has an educational value. The teacher has control of her powers, and is not cross, does not fly off on tangents, nor irritate the pupils into hatefulness. There is usually improvement in health, flesh, spirits, intellect, and efficiency, under this plan. The tired teacher usually has the blues, about nothing, and is a fretter,

grumbler, and scolder. The same rule should apply to pupils. To keep a class standing for twenty minutes, is to poison the brain, reduce their intellectual power, and thus retard their progress. It makes pupils hate school. We always hate things and people which unduly tire us. Recitation, sitting, is always more profitable, for both teachers and pupils. Fatigue renders close attention impossible.

All unnecessary exertion before school, is very detrimental to progress. Violent work or play by the pupil, before 9 a. m., makes him much less able to learn. A teacher who walks far to school, or even rides eight or ten miles, sadly impairs her efficiency as an instructor, no matter how strong he or she may be, and usually injures her health. Cases may be recalled, by any one.

We sometimes find a child in school whose conduct suggests the term "wiggler." Some mothers and teachers interpret his wiggling to be an index of unusual talent, or of great desire to be at work. It is merely an index of nerve exhaustion, and of diseased brain cells, and his constant physical activity only aggravates the disease. A wiggling, restless teacher makes her pupils wigglers, and thus hinders their education. The quiet teacher, physically, unconsciously makes her pupils quiet, and often cures the wigglers of nervous debility and incipient chorea. The more quiet a child is in his seat, the more easily he can learn. With a tired, nervous, restless, half-sick teacher before him all day, he cannot sit still. She tires him, because she gives him disagreeable sensations, and also because he, unconsciously, imitates her, *in her feelings*,

bearing, and physical habits. Even talking in a loud tone tires her pupils. It is tiresome to even listen to loud noises, especially to those in a high key. We rest better to close the ears and eyes. A low, smooth voice rests the pupils, and tires the teacher far less, thus leaving each with more moral and intellectual power. A recent writer has affirmed that most of his patients who suffered from nervous exhaustion, were incessant talkers, and that his prescription of a few hours' silence each day cured them. If not wholly true, this is largely so, as physiological chemistry and observation affirm.

I stated that unpleasant emotions poison the blood. Therefore the teacher who scolds (or anyone else) habitually, destroys her own health and intellectual capacity, and that of those under or near her. It is, scientifically, giving them blood poison. Scolded pupils, children at home, horses, dogs, and men, have less strength and intellectual power than they otherwise would. Stupidity is produced in both the scolder and the scolded, as any one may find out for himself by observation. Let those teachers who mistake excitement of a pupil for thought and interest, remember the grand truth that emotions tend to move the body *and thought to quiet it*. The thinking pupil sits still, naturally. Emotion and thought are antagonistic, each weakening the other, when acting together, as psychologists have affirmed for decades, or centuries. Physiological chemistry now echoes the statement, and from that decision there is no appeal, for the supreme court of fact, is the highest tribunal in science.

If it be the aim to lead one to think clearly and closely, there should be no feeling excited, beyond the point of interest. Excitement is an enemy to reason. The teacher who leads her pupils to think, will rarely have occasion to tell them to sit still. They will do it naturally. There are many minor points in this line of much interest. The hum of whispering or loud study is also very fatiguing, and I have observed that the attendance in a still schoolroom is better, other things being equal, than in a noisy one, because the pupils like a quiet room, and are always comparatively fresh and rested. The stillest room, too, makes the most progress. The natural expression of thought, is a low tone; of emotion, a loud one, and usually in a high key. Competent authority affirms that the best position for close thought, is that in which the person is sitting at a desk, with his head leaning slightly forward, resting upon the right hand for support. A recumbent position is probably as good or better. A recess in which violent games are played is simply a process of stupefaction, by loading the blood with material which has an effect upon the brain, like a narcotic. The studious pupil does not seek violent play, as a rule, because his energy has been used up in school tasks. The idler is the rough, loud player, and returning to the schoolroom tired, he has neither the desire nor capacity for study. A recess in which the pupils converse quietly, and walk leisurely is not bad. Those who yell and play violently, I have observed, are either dull, or deficient ethically, and intellectually, like those in the upper gallery of a theater. Like animals, their mouth is their psychic centre.

Their higher centres, as of thought, the esthetic, moral, and religious, are undeveloped, so they seek pleasure on a lower plane. In a young child, this condition is the normal one, of course, but, like other infantile conditions, it should be tolerated, but not encouraged, until he can be cultivated and developed up, and out of that low plane of life. The "yelling period" is a stage in every boy's growth. It is a bad symptom if it last too long, for it means that development is arrested at a low stage.

We meet people who are often saying, "I did not think," and are noted for their "after wit." They never do their best. This condition usually comes from fatigue and rest will cure it. It is, also, a disease, and may be induced by other diseases. Experiments show that the errors in the work of children are fewest in the morning, and most numerous in the afternoon, as might be expected. But in the morning, remember, the work of the brain is slower. Some kinds of weather "make us tired." On certain damp, "muggy" days, with a low or falling barometer, all goes wrong in school, home, church, store, and factory. All are' tired, lazy, cross, stupid, irritable. Why? Simply because the atmospheric condition, its moisture and low specific gravity, hinder the elimination from the blood of the waste materials, which cause fatigue. Michael Foster says that we can measure the loss of physical power on such days in foot-pounds. The laborer is not so strong, by ten or fifteen per cent., nor is teacher, pupil, child, or parent, pastor or congregation, so smart or amiable. A rising barometer or a high one, with low humidity, makes

happiness. The knowledge of these facts may help us to act becomingly, in spite of our physical temptations to do otherwise, to our own detriment and the unhappiness of others.

SCHOOL PROGRAMS.

The laws of fatigue show, clearly, that all abstract studies, such as technical grammar, and arithmetic, should come in the forenoon, as early as possible. The more concrete ones, and those requiring less close thought, should come in the afternoon. Among these latter are writing, reading, drawing, and spelling.

There is a fact, proved by experiment, but not perhaps fully explained, that may be given, incidentally, as one aspect of fatigue. Some teachers believe in a program. Others do not. Which is best for progress? The mind and body work in rhythm. He who does the same thing, at the same time, each day, does it more easily than he who has no program, so to speak, of labor or study. Both the mind and the body during the day have a rhythm of efficiency. Perhaps a task impossible at nine o'clock, may be possible at ten. The curve of weariness and efficiency is not a regular curve, but a wavy line, going lower from morning to night. A school should have a program and it should be exactly followed, to do most work with least fatigue. Neurologists no longer doubt that each bodily movement, thought, emotion, and act of will has a centre in the brain, upon which it depends for manifestation and which wearies by continued use, locally as it were, and also causes general fatigue, by throwing waste products into the blood. The

practical aspect of this truth is the fact that pupils of six may do good work, in other words be at their best, for fifteen or twenty minutes, and of sixteen, for about thirty minutes but no more. Longer recitations for these ages are unwise. The pupil should always be kept nearly at his best. Nervous exhaustion, irritability and a train of diseases, a dislike of study and of school, and mental debility follow violations of this rule.

FACTS IN HIGHER EDUCATION.

There is something very wonderful, not fully understood, in the effect of close logical thought, and also of the religious feelings, upon the brain and general system. A few facts may be affirmed. Close thinking tends to level down the unequally charged centres of energy in the brain, and saves the individual from those violent, senseless, unwise, and sudden outbreaks, tangent-like, so common in the ignorant and uncultivated. It makes people level-headed. Nothing is so fatiguing, so loads the blood with the most poisonous material, as violent emotions of a low type. So, in fact, thinking keeps one from weariness, by repressing excitement. I believe the same is true of the religious feelings. In general, the higher the faculty, the more beneficial the exercise, and the less harmful the fatigue products. Holiness brings healthfulness, and mental power. The chemistry of the future will probably give us the formula on which these facts are based. Brain workers, other things being equal, are longest lived, and the same is true of religious people.

THE CHEMICAL BASIS OF "IT MAKES ME TIRED."

The slang phrase, "He makes me tired," has a sound scientific basis. The phrase might be, just as correctly, "He makes me sick." Why? A disagreeable feeling loads up the blood with material far more deleterious than pleasant ones. When we meet a person who is disagreeable or says disagreeable things, the waste products of our brain, very large in quantity under any emotion, enter the blood and really tire us. Continue it long enough and we should be sick. When teacher and pupil, principal and teacher, pastor and people, clerk and employer, mutually make each other tired, it is best for both that one seek a new field of activity. They literally give each other blood-poisoning, and make each other stupid and irritable. On the other hand, when co-laborers are mutually agreeable, each is made smarter, more healthful, and more efficient. Fidgety, restless, ill-at-ease, alway-in-a-hurry persons—the so-called nervous ones—produce disagreeable feelings in those near them, and thus tire their listeners, as anyone may know from his own experience. A thoroughly healthful person is usually restful to those near, and so, in fact, as we have seen, improves their health, and tones up all the faculties of their mind.

FATIGUE AND THE MORAL NATURE.

The relation of the science of fatigue to the religious development of a child or a nation, is very close. Extreme or long-continued fatigue militates against morality and spiritual growth. The Spartans were in constant training for war, and they did no think-

ing, neither made nor used any literature, and counted successful thieving a great virtue. Prize fighters, with their splendid physical development, are not noted for their thought-power, nor morals, and never will be.

Sabbath breaking, because it precludes complete rest of the cells of the higher faculties, lowers the moral tone in all lives, and is a cause of crime. The morality, business and social, of a community, usually rises and falls with respect for the Sabbath. The intellectual activity, also, follows the same rule, and the esthetic sentiment as well. So far reaching is this law of fatigue, in relation to the higher faculties, that even the giving of a cup of cold water, in charity, or doing any one a favor, by word or deed, gives health, and moral elevation, to the doer.

It is a source of regret that in many places, the Sunday evening services are so poorly attended. Some lay it to the minister, some to the people. It has been stated that the higher faculties of the mind are the first to tire. A man's religious nature, after a hard day's work on Saturday, is in a very feeble condition. Saturday is usually the hardest day in the week, and the rest of twelve hours does not restore the brain cells to their normal state, nor suffice to remove the waste products from the blood. The religious part of his brain is most exhausted, and he can neither appreciate nor understand religious truth as he could after a day of rest. A half holiday on Saturday afternoon is the remedy for empty churches Sunday evening. The will is a higher faculty, and that, too, is so weak on Sunday, that only strong natures can rouse it, to attend church. The conscience, also, is well used up

by Saturday, and the man who was strictly honest and truthful on Monday morning, cannot always be trusted Saturday evening. And yet, his intellect and business capacity, being lower feelings, are less tired, and may be nearly up to their normal activity, and continue so during the Sabbath, thus dominating the actions of the man.

A man can have interest in a play when he could not in a sermon, or lecture. The facts of fatigue settle scientifically and beyond appeal, some social and religious questions. Dr. C. F. Hodge, of Clark University, proved that, while eight or ten hours of rest restored the tired nerve cells to a condition nearly normal, at least thirty or thirty-six hours is needed for an absolutely complete recuperation. That means that a Sabbath, giving so long a rest, is a necessity, if man is to do his best work, physically and intellectually, or live at his best esthetically, morally, and religiously. Plump, round, rested brain cells give a full contribution box, on the Sabbath. This condition of best work is equally true of the student, the clerk, the laborer, the housekeeper, and her servant. The clerk working seven days cannot be as honest, as genial, nor as clear headed as his Sabbath-keeping fellows. The man who makes his clerks stand all day must not expect them to be honest. The servant of seven days is less amiable, less tidy, less intelligent, less honest, than her friend who works but six days. The Sabbath-keeping pupils learn most rapidly.

The horse will draw more and live longer if he rest on the Sabbath. The wicked student who pours over his books on Sunday to get ready for Monday's

examinations, is doing the worst possible thing for his own standing. The same is true of night study before any heavy intellectual work. He who does not rest on the Sabbath, chops all the time, so to speak, with a dull ax. Science proves that a Sabbath with little physical effort, with no play of the strong, low emotions, but with active exercise of the high, religious feelings, so health producing, is the Sabbath of physical rest and mental and moral recuperation. Every brain cell is stamped, by the divine hand, with the word Sabbath, and science echoes the command of revelation.

I wish to return my thanks to my valued friends, Dr. William H. Burnham, of Clark University, Worcester, Mass., and Dr. C. Eugene Riggs, of St. Paul, Minn., professor of nervous diseases in State University, Medical College, at Minneapolis, Minn., for special courtesies while preparing the above paper. I am indebted to Dr. Burnham for valuable information in regard to the bibliography of fatigue, and to Dr. Riggs for a critical reading of that part of the paper touching upon the physiological chemistry of fatigue. The specialized researches of both men are fully balanced by their rare qualities of heart and capacity for friendship.

DISCUSSION.

Remarks by John G. Thompson, principal State Normal school, Fitchburg, Mass. :

The speaker has told us that quiet is a requisite for intellectual activity and that after emotion, fatigue follows and the brain cannot do its best work. I should like to ask in regard to the relation, each to each, of emotion, interest, and intellectual activity. Can any act of the intellect be of great value if it be in no way based upon emotion? Is not the human being something more than a machine? Does not

the soul often rise above the limitations of the body? Is it not a principle of the kindergarten that the heart of the child must be reached, that his interest shall be heightened by putting his work into such forms as appeal to him? Does the kindergarten consider quiet a requisite for mental activity?

Allow me to give a homely illustration of the point I wish to make. In the primary school a child is taught to recognize a word when written upon the board. In so doing he associates the written word with the idea of the thing on his mind. The number of times this act of association must be performed depends upon the degree of interest and attention in the pupil.

For example, a new word is to be taught. Let us suppose the word to be "spanking." In teaching "apple," the object was presented and then the word written on the board. In the same way with "spanking." The teacher gives the pupil an extremely severe spanking. Now according to the doctrine of fatigue presented by Dr. Baker, the pupil's mind cannot act as well in the second case as in the first. Physically and emotionally, he is fatigued. Yet I venture to assert that the one act of association of the spanking received with the written word will enable him to recognize it ever after, while in the case of the word "apple" the association must be often repeated before he can recognize it at once.

Prof. J. B. Taylor, principal of the Berkeley school, Boston, asked whether Dr. Baker's paper recognized sufficiently the enormous differences in physical, men-

tal, and moral energies of different children and adults, and whether it was not a fact that America was full of forceful men and women who had pushed their way successfully to the highest positions in the country, even to the presidential chair, only by almost ceaseless activity of body and mind, relieving, refreshing, and strengthening as we had been taught, the waste of one kind of tissue by the exercise of another. The views of Dr. Baker seem to discountenance this type of character and its methods of achieving success in life.

Superintendent Carroll's discussion:

The speaker affirms that the kindergarten and school should be quiet. How will he explain the freedom that is allowed, both in the kindergarten and in the primary room, under the charge of the most successful teachers of this country? The speaker states that all exercise should come at the close of the school day. On this theory, how would the speaker treat the recommendation that physical exercises be introduced into the school curriculum?

IV.

LIBRARY METHODS OF STUDY.

BY CAROLINE M. HEWINS, LIBRARIAN OF HARTFORD PUBLIC LIBRARY.

Mr. President, Ladies and Gentlemen:—Some of the pleasantest remembrances of the school-days of all of us are those of books surreptitiously read inside the kind protection of a large geography, or of stories cut from newspapers, tightly rolled and passed from hand to hand. Perhaps some of us who are not constantly teaching the binomial theorem, the rule for cube-root, or the twenty-six prepositions that govern the accusative, do not remember them half as well as we do those books or those stories. But the literature that was once looked upon as something apart from school-life has now a place of honor in the new education, and children are taught how to make the best use of it.

During the last twenty years, a cordial understanding has grown up between teachers and librarians on the use of free public libraries. Anyone who is interested in the subject may follow its growth in the files of the *Library Journal* from its first volume in 1876 until now. In 1883, Mr. Green of the Worcester Public Library, one of the earliest and most enthusiastic workers in this department of library science, collected into a small volume entitled "Libraries and

Schools," half a dozen papers read before various associations, including one written for the meeting of the American Institute of Instruction in 1880 by Mr. Robert C. Metcalf. Mr. Sawin of the Point Street Grammar School, Providence, and Mr. Sickley, superintendent of schools in Poughkeepsie, have published year after year carefully selected books adapted to various grades.

The work of Miss Stearns of Milwaukee, a teacher who made her school a branch of the Public library and is now superintendent of circulation in that Library, is described in a recent number of the *Forum* by the superintendent of schools of the city. She has been so remarkably successful that her method may well be followed in other places. I wish that you had all been fortunate enough to hear her describe it as she did at the meeting of the American Library Association last summer.

How are teachers in small towns, and towns with no libraries, to give their pupils the use of books outside their text-books?

All the New England states and New York encourage the formation and maintenance of free libraries by offering gifts of books or annual appropriations of money.

MAINE.

Every town maintaining a public library reports May 1 to the state treasurer the amount spent for books the preceding year, and obtains from the state 1 per cent. of that amount with which to buy more books. Lists of books so bought are reported.

In towns of less than 1,500 inhabitants, if the voters

have raised \$100 for books and provided for their care, they may receive from the state librarian books bought for the purpose, costing not more than half the cost of books bought by the town to found a library, and not more than \$100 in any case. .

Librarians or trustees may ask the governor and council for advice in selecting books, and receive at the State Library instruction in cataloging and library administration.

NEW HAMPSHIRE.

The New Hampshire library law enacted in 1891 provides for the appointment of a board of library commissioners consisting of five members, and makes it the duty of the board to furnish \$100 worth of books to any town having no public library owned and controlled by the town, if such town shall adopt the provisions of the law, provide for the care, custody, and distribution of the books so furnished, and agree to appropriate a small sum annually for the support of the library. By the terms of the law the commissioners sustain an advisory relation to the public libraries of the state.

Public libraries which are duly designated by the governor and council are entitled to receive state publications.

VERMONT.

In 1894 a law was passed authorizing the governor to appoint a board of five library commissioners and designate the chairman thereof.

This board of library commissioners shall expend, upon the application of the board of library trustees

of any town having no free public library owned and controlled by the town, a sum not exceeding \$100 for books for any such towns entitled to them, these books to be used for the purpose of establishing a free public library; the commissioners to select and purchase all books so provided.

Every town receiving this aid shall annually appropriate for its free public library a sum not less than \$50 if its grand list is \$10,000 or upwards; not less than \$25 if its grand list is less than \$10,000 and not less than \$2,500, or a sum not less than \$15 if its grand list is less than \$2,500.

The board of library commissioners shall constitute an advisory board, upon which the librarian or trustees of any free public library may call for advice on all matters pertaining to the administration or maintenance of the library.

MASSACHUSETTS.

A library commission of five members is appointed by the governor and council.

Any town having no public library may receive \$100 worth of books to be selected by the library commission, provided it accepts the provisions of an act approved in 1890. The town receiving such aid must appropriate not less than \$15 if the last assessed valuation of the town is less than \$250,000; \$25 if less than \$1,000,000 and not less than \$250,000; and \$50 if the valuation is \$1,000,000 or over. Suitable provision must be made for the custody, care, and distribution of the books.

Those towns whose valuation does not exceed

\$600,000, already having public libraries, may receive \$100 worth of books, provided that such towns have their libraries organized in accordance with the case of towns having no public libraries.

The librarian or trustees of any free public library may ask the library commission for advice in regard to library administration or maintenance. The commission is ready to lend books for purposes of reference to libraries established or aided by it. A town may take land for a public library building. Provision has been made for supplying to libraries copies of histories of military organizations of the state.

In addition to the special privileges described, the commonwealth also allows towns to make such appropriations as they please for the establishment and maintenance of public libraries.

RHODE ISLAND.

The State Board of Education is authorized to appropriate (under conditions specified by itself) certain annual sums to each free public library established and maintained in the state, to be expended in the purchase of books therefor.

(Said sums are graded according to total number of volumes owned by the library, but are in no case to exceed \$500.)

Each city or town receiving state appropriations in virtue of having adopted or established a public library, shall annually appropriate for the support of the public library an amount at least as much as that which the library shall receive from the state.

Each city or town is authorized to appropriate not

to exceed 25 cents on each \$100 of the ratable property for the foundation of a free public library; and not to exceed 20 cents on each \$1,000 for the support of any such library, whether owned by the town or not.

CONNECTICUT.

By a law passed in 1893 the State Board of Education annually appoints five persons to be known as the Connecticut Public Library Committee. Librarians and directors of public libraries and teachers of public schools may ask this committee for advice and assistance.

If any town, city, or borough having no free public library shall establish one and provide for the care, custody, and distribution of books and the future maintenance and increase of such library in a manner satisfactory to said library committee, said committee is authorized to expend for books to be selected by the said committee a sum not to exceed the amount expended for the establishment of such library, and not to exceed \$200.

No person shall be ineligible by reason of sex to serve on the board of directors of any public library or on the Connecticut Public Library Committee.

SECTION 1. The libraries established under the provisions of Chapter CLXXVIII of the public acts of 1893, and any free public library receiving a state appropriation, shall annually make a report to the Connecticut Public Library Committee.

SEC. 2. The Connecticut Public Library Committee is authorized to expend annually for any such library a sum not to exceed the amount annually appropriated

and expended by the town, or in the case of a town whose grand list does not exceed six hundred thousand dollars, the amount annually appropriated and expended from any source, for the increase of said library, and not to exceed one hundred dollars, the said sum to be expended for books selected by said committee.

NEW YORK.

Under a recent law substantial aid is offered to any community willing to do its part in providing its citizens with the best obtainable reading.

Public money.—The regents annually apportion \$25,000 for the benefit of free public libraries on the following conditions:

Libraries receiving aid must be under state supervision and their work approved. They must be free to the public for either reference or circulation. A college or academy library must be open every day while classes are in session, and in vacation must be open one hour on three days of each week. Other libraries must be open at least one hour on three days of each week, and oftener in the larger places according to population. The grant to each library is limited to \$200 a year. An equal amount must be raised from local sources. The whole amount must be spent for books approved by the regents.

Travelling libraries.—The use of a travelling library of 50 or 100 volumes is also offered to any library in the university, or to any community on application of 25 taxpayers, or of the officers of a registered extension centre, study club, or reading circle. Satisfactory guarantee must be given for return of books

within six months, and a fee of \$3 for 50 or \$5 for 100 volumes must be paid. Annotated catalogues of these libraries can be had free.

Subsidies.—A library not owned by the public but maintained for its welfare and free use, if registered as maintaining a proper standard, may obtain a subsidy from local taxation not more than 10 cents a volume of yearly circulation as approved and certified by the regents.

Free libraries in large cities circulating 75,000 volumes a year may obtain a subsidy of \$5,000, and \$5,000 more for each additional 100,000 of circulation.

In places of less than 30,000 population, a free library may receive \$1,000 for each 15,000 of annual circulation.

CALIFORNIA.

Ten per cent. of the state school fund annually apportioned, not to exceed \$50 in any case, is available for district libraries. In some cities this may be \$50 for each 1,000 children, 5 to 17 years old. Libraries are free to pupils and open to residents who pay fee required by school authorities.

COLORADO.

Cities and incorporated towns are permitted to establish free public libraries if they so desire, but must depend entirely upon their own resources for the support of them.

WISCONSIN.

For the support of school district libraries, any town treasurer may withhold 10 cents for each person of

school age from the school fund income. State superintendent prepares lists of books.

In the small towns where teachers have a power and influence not felt in the large cities, it should be a part of their work to encourage in every possible way the acceptance of what the state offers. Then when the town is ready to buy books, let them see to it that it does not make one of two mistakes. Trustees of town libraries often believe that the library should be furnished with standard works in many volumes, which look well on the shelves and stay there, or else they buy poor novels to the exclusion of everything else. A town library should be for the greatest good of the greatest number, and should have attractive books, good well-written stories, histories well illustrated and not written on obsolete principles, popular science up to date, books on farming, gardening, and housekeeping, books in short that can be used in every-day life for instruction and amusement. And it is above all important that if the children of a town are to learn the reading habit that can never be acquired after twelve years old, there should be interesting books provided for them. Some towns buy duplicate copies of *Uncle Tom's Cabin* or the *Lady of the Lake* or *Robinson Crusoe* and send them from one district to another to be read in school, letting each one keep them from one to three months. In some cities, as in Milwaukee, every school is a little branch library, and every teacher a librarian, who knows the character and needs of every child and offers help in the selection of books.

We hear much of the connection of studies, of making a lesson in geography, for example, one in

spelling, penmanship, English, arithmetic, and history. Every lesson in the schoolroom may be made a lesson on the use of the free library. A country school has advantages over a city one, not only in the greater flexibility and freedom of the teacher's work, but in the opportunities which the children have for out-of-door observation. You are all familiar with the answers to questions asked children in the primary grades of the public schools of the poorer part of Boston, which showed that a large proportion of them had never seen a cow and did not know the names of the commonest flowers. A well-selected school or town library has books like Mrs. Dana's "How to Know the Wild Flowers," Grant's "Our Common Birds," and Mrs. Ballard's "Among the Moths and Butterflies." I recommend buying for school libraries books like these, telling the names and habits of the flowers, birds, and insects around us, rather than expensive volumes of general natural history. There is no resource which lasts longer or gives more pleasure than a love for some out-of-door study, and every country teacher should be enough of a field naturalist to have at least a bowing acquaintance with the local birds, insects, and plants, and encourage children in making collections, but not in robbing birds' nests from mere wanton cruelty.

We librarians are as a class willing, even eager, to establish close relations with teachers and pupils, but these relations cannot exist unless teachers will meet us half-way. In my own city, we have the most cordial and intimate relations with the teachers of public, parochial, and private schools. The teacher who can say

in giving out George Washington for a topic, "Go to the library and ask for Scudder's Life, and Hale's, and Lossing's Mary and Martha Washington, and the old volume of *Harper's Magazine* that has an illustrated article on Mount Vernon," has a great advantage over another who, with good and honest intentions of making her pupils profit by the library, sends boys and girls of twelve to Bancroft's or Hildreth's History. Ask the librarian to help you. Tell her (it is usually a woman in a country town) that your history class would like to see all the portraits that she can show them of men, women, and children connected with the American Revolution, copies of autographs, pictures of costumes, of old houses, of the furniture and china used at the time, and she will in a few days have ready for exhibition what we call a "picture show," the variety and extent of which will surprise any one who has no idea of the resources of even a small library.

What a teacher should teach most of all, is the power of using books readily, without loss of time in searching for subjects. There is as much difference in the way of handling books, by a trained and untrained reader, as in the handling of tools by a skilled and unskilled workman.

Children should acquire the habit of rapid work, ability to turn from one book to another without loss of time, perfect familiarity with indexes and other short-cuts to knowledge. I have known a high-school graduate who did not understand what II or III before the figures indicating a page meant in a work of several volumes. The use of indexes, tables of contents, and books of reference is the alphabet of

reading, especially for a teacher, and should be as familiar to one as the multiplication table. One way of teaching children familiarity with reference-books is by encouraging them to solve some of the many prize questions which are scattered about in magazines and newspapers. It makes no difference whether they take a prize or even try for one, but it does make a difference all through their life whether they can handle books or not. Take for example a short story like Hawthorne's *Virtuoso's Collection*, full of allusions to characters in history, novels, and poetry, and see how many of them the boys and girls can find. The encyclopædias will not help them much, but there are other books that will. Some of the most common in city or town libraries are Brewer's *Dictionary of Phrase and Fable*, *Historic Note-book*, and "Reader's Hand-book," that are good as far as they go, though not always accurate, Chamber's *Book of Days*, Walsh's *Handy-book of Literary Curiosities*, Frey's *Sobriquets and Nicknames*, Brande's *Popular Antiquities*, Wagner's *Manners, Customs and Observances*, the seven bound volumes of *American Notes and Queries*, and the indexes to the series of *English Notes and Queries*.

The history class of a school that I know spends an afternoon every year in the hall of the State Historical Society, surrounded by portraits of men and women famous in colonial and revolutionary times, velvet coats and satin waistcoats, high-heeled slippers and silver buckles, autograph letters of Washington and Putnam, Putnam's battle-sword and tavern-sign, Benedict Arnold's watch, one of Abraham Lincoln's mauls,

and hundreds of other objects that make history a living reality. Last April, after every child had personated a historical character for the others to guess, the librarian of the Historical Society let them see a treasure which had lately come into his possession, the manuscript diary of a girl living on a Connecticut farm in 1775. Nothing in school books ever brought the time before them as vividly as the entries in faded ink in yellow paper, telling how this farmer's daughter cleaned house, scrubbed and sanded floors, scoured pewter, hatched flax, carded wool, spun, made gowns and bonnets, washed, ironed, milked the cows, salted tongues, made and mended "harnesses" for her loom, went to school through the month of January, "cyphered all day and finished the third case in practice," (she was twenty-five years old), probably with goose quills that she mentions going to get, made wax work and knit borders for aprons by way of fancy work, "knitting all day as stiddy as a priest," she says, but with all this was not too busy or too tired to watch with a sick neighbor. She tells when the family had pork and beans for dinner, and pancakes for supper, when she "went to beg emptins to put in the blue dye," when "Ellen and David were cryd," and "Sal had a spark, but hid him." On the 21st of April, 1775, she heard that there was fighting in Boston, and she says, "Jonah came and telled me I must go to making biscuit for to carry to fight the regulars, which I did." Then more brothers and cousins began to go where the country called them, and the girls baked and washed and mended to get them ready.

There must be many more such diaries in the attics

of old country houses, of untold value as historical documents. The first lesson that you have to teach your history classes is that history did not come into being ready-made between the covers of a school book. Ask them how they think that the book was written, where the author got his facts, how he knew, for example, that Washington lived. If they say from other books, ask where the authors of these books found their information, and lead back to the existence of Washington's own letters. Tell them that history is made from written documents, and that every letter or journal may be valuable sometime as a piece of history. This argument may be used in inducing children to write letters carefully and express themselves as well as possible.

As to your reading, it should be deep enough and broad enough for you to be always finding new things that you can tell to children. I like the story which I read once in a novel that is entirely unknown nowadays, of a mother who whenever she found anything in her own reading that especially interested her, called all her children from their work or play and made them sit down around her until they had listened to the stirring poem, striking passage in history, pithy epigram or skilful character drawing that had appealed to her.

A few simple rules for the use of library books will help teachers.

1. Insist that children must have clean hands before using them, and show them how to hold and carry books carefully. One of the Hartford teachers tells her pupils, "Books are friends and must be treated like them." Make them learn Eugene Field's rules,

"Never handle a book with soiled or moist hands. Never turn down the leaf of a book. Never leave a book open. Never stuff letters or leave a paper-cutter or pencil between the leaves of a book. Never leave a book lop-wise on a shelf. Never cut the leaves of a book with anything but a paper-cutter or a dull case-knife."

2. Teach them to notice the author's name in every case. There was a good little hint on this in *Harper's Young People* last year, in a story where a mother makes her daughter notice also the names or initials of artists in the corners of illustrations. Some of our Hartford children write that they never notice the names of authors.

3. Read to them sometimes and let them finish the story themselves.

4. Ask them to tell you whom they like best in the stories that they read.

5. Encourage them to use the library. The day has gone by when school books and library books were regarded as natural enemies to be kept apart.

It is well to remember in teaching children the use of books, that many books have a value entirely apart from their literary qualities. Convince a boy who is keeping hens that a library book will tell him how to build his house and what food produces the most eggs, or a girl that she can learn something about easy cookery from *Dora's House-keeping* or *Six Little Cooks*, and you at once have a starting point. Some children who never willingly read even a story-book may be appealed to by anything that bears upon their favorite work or amusements.

When you have made a child understand that infor-

mation on any subject that he desires may be found in some book, you have gained a point. If a boy whose pet rabbit has begun to droop and show symptoms of illness comes to you to ask if there is anything in the library that will tell him how to cure it, and after some searching you discover that the disease is probably caused by too much green food, and find in a book a minutely described and carefully varied table of rabbit diet for the seven days of the week, that boy goes away with his belief in the usefulness of books strengthened. At the end of a week, when he comes back to tell you that the rabbit is on the road to health, he is pretty sure to ask you for a book that he himself will like to read for pleasure.

It is a good thing for children to like to go to a library. I do not quite believe, with a friend of mine, that it should always inspire them with awe to enter it. My feeling is that it should be to them like the well stocked pantry of a kind grandmother or aunt, full of sweet, wholesome bread, and ginger cakes, and perhaps on the high shelves some plum cakes and jellies for high days and holidays. The said plum cakes and jellies are the valuable illustrated books which you may once in a while show children as a treat. If you are near a large library and have half a dozen especial friends among your children, invite them some day to see Darley's Rip Van Winkle or Sleepy Hollow, or, if a little older, some illustrations of Shakspeare, or if they are among the thousands of young naturalists growing up all over the country in the Agassiz Association, let them see Audubon's Birds or Holbrook's North American Herpetology.

You cannot talk with children about their reading unless you have filled yourself full of it, and made their friends yours. If I were setting an examination paper on literature for applicants for teachers' certificates, some of my questions would be like these:

What did the middle-sized bear say to little Silver-hair?

Why did Whittington send his cat to Barbary?

Which version of Cinderella do you like better, the German with the doves, or the English with the god-mother?

Which part of the Cheshire cat vanished first and which last?

Teachers and librarians have to guard against setting too high a standard for children, and expecting them to live up to it. If you have kept young and not lost your interest in childish things, or your power of seeing into childish minds, you can help children in the choice and appreciation of books much better than if you give yourself up entirely to literature for older readers.

Last year, at the request of the principals of the district schools, the Hartford Public Library bought fifty copies each of Burroughs's *Birds and Bees*, *Robinson Crusoe*, *Franklin's Autobiography*, *Hawthorne's Wonder-Book*, *Irving's Alhambra*, *Kingsley's Water Babies*, *Lamb's Adventures of Ulysses*, *Martineau's Peasant and the Prince*, *Rolfe's Tales of Chivalry*, from *Scott, The Lady of the Lake*, *The Merchant of Venice*, *Cooper's Last of the Mohicans*, *Uncle Tom's Cabin*, *The Arabian Nights*. The principals of the schools meet at the beginning of every term, and decide where

certain books are to be sent for the next two or three months.

In the term just closed, a class read *The Last of the Mohicans*. One boy writes, "The Last of the Mohicans is an Indian story by James Fenimore Cooper. Its about the French and Indian Wars. It is about two Mohicans, the last of their tribe, escorting some English people through the woods and French lines and encountering many adventures to bring them to the English fort. It is very interesting."

And his teacher adds, "This boy doesn't like to read, but in *The Last of the Mohicans* he has found a book which fills in every odd minute in school, at least."

The schools have also in their own libraries the same number of copies of other books, for supplementary reading.

The teachers are allowed to take an unlimited number of books for school work, and often send for all that we have on countries which their classes are studying in geography. Before Christmas we send to all the schools lists of stories, poems, and magazine articles upon the day itself or the holiday season. An excellent list of this kind has been prepared by the public library of Indianapolis, and an exhaustive one on Memorial Day by the Public Library of Milwaukee.

We opened the Hartford Public Library not quite three years ago. It had previously been a subscription library, but for a few years the older classes in the district schools had had the free use of books in connection with history and geography. In 1892 we

admitted every child in the city old enough to write to all the privileges of the library, and this year I have asked the children from ten to fifteen years old to write me letters, telling how they use the library. In one school, where I have been in the habit for several years of spending an afternoon in talking over books with the children, we always ask them to tell why they like certain books, and what characters in them they would like to have for friends. This explains the allusion to friends in some of the letters. Out of more than four hundred children, about sixty have never used the library. Half a dozen frankly confess that they do not care for reading. Some have weak eyes, and there are fathers and mothers who still hold to the old-fashioned idea that children cannot do justice to their school lessons if they read books outside their text-books. They seem not to have learned that a library can work with school and not against it.

As soon as we opened the library, we had ready and sold for five cents a classified author-list of our books for children, with suggestions of books for older readers which they would find interesting. Some of the children use this catalog, and others prefer choosing books from the open shelves. The letters are from children of all sorts and conditions, for in Hartford it is the fashion for the richest as well as the poorest families to send their children to the public schools. There are German, Italian, Irish, Russian, Roumanian, and Polish names signed to the letters, and the children who appreciate our library most are from the poorest families.

I am in the way of seeing some of the younger children, from six to ten years old, in a street where many of the fathers and mothers speak little or no English, and it is interesting to notice in their talks with each other and with some of their older friends, their fondness for and appreciation of Longfellow's poems that they have learned or read in school, notably *Hiawatha*, *The Village Blacksmith*, and *The Children's Hour*.

EXTRACTS FROM LETTERS.

I have only drawn one book from the library, and it was a fairy tale, and I didn't like it. I think it is a good thing for people that like to read, but for people who don't like to read it is not so much fun. I take only interest in one book, and that is the *History of the United States* which I think is the best for boys. The School has drawn some books, but I don't like them. Some were fairy tales, others love stories which I don't take no interest in at all. One of the books is the *Alhambra*; I think it is not a very good story.

I liked Beautiful Joe because it told a great deal about animals. I liked the life of Jefferson because it made him stand out before me and seem to be a great and good man as it never seemed before. I think these books helped me in many ways, especially making me anxious to read more about animals and their ways. Also making me want to read the lives of more of the presidents. The principal friends I made were Beautiful Joe and Thomas Jefferson. I like Joe because he was kind, patient and affectionate, seeming more like a person than a dog. I liked Jefferson because he was so fond of his school and when he

became president he did not want to seem more like the king and dress and have better things than the people, he dressed and acted more as the people did.

I like to read "trash"—as my mother calls it. I mean Indian stories and books of adventure.

I am very fond of books on boats. I have taken the American Boy's Handy Book three or four times and think it is the best book of the kind I ever read. I took some books on drawing and mechanical operations but did not read them through.

The first time I read Uncle Tom's Cabin when I had read to where Eliza was going up the hill to the house, I had left off there and went to bed. After a while I dreamed that I was the woman of the house where Eliza was going. When I was in my dream I got up and went to the door to open it and let Eliza in and then I said, "Now she is in." The next morning papa told me I had got up and let Eliza in last night, and I didn't know anything about it.

I have read a few books which have helped me very much in my school lessons. I like to read poems, we read them quite a good deal last year; we read Longfellow's, Whittier's, Bryant's, and some of Holmes's. I like to read Bryant's poems and Longfellow's. Dr. Holmes writes very funny poems and so does Longfellow, and they both like children. Longfellow has quite a number of children himself.

I have been taking books from the library for nearly three years, the ones I most recommend are Ellis's works. There are a great many more books I like

written by such authors as Henty, and Trowbridge. I have a very nice book at home now which tells about the stars. It is full of conversation and that is why I like it so well. Some people recommend such ones as Scott's works (all poetry) for boys, but I like one full of adventure.

I would say that at present and during the winter I have not taken any books out of the library, the reason in the first place is that I find very little time to read. But I can say that I have used considerable books that come from the library that were brought to the School. These books were pertaining to the debates that were held there during the winter. I use the reading and reference rooms only when I want some information. I do think though that the books I have read and studied in regard to our debates have been one of the greatest benefit to me.

If I was six or eight years old I might like Louisa Alcott's or Molly Seawell's stories but I am a little older. Lately I have been reading Trilby, Age of Electricity, Cabin in the Clearing, Little Smoke, Log Cabin to the White House, and a great many other books, but I like the Age of Electricity best.

I like to get different books for school in connection with our lessons. I have been in the reference room to look at a book that I have never seen before, and I enjoyed it very much, because in some ways it helped me along with my studies. As we advance in geography we study the different continents in the geography and different cities. I like to get a book and it tells everything about that continent or city that anybody

would want. Just now we are studying the continent of Africa and there is so little about it in the geography and it is so important a country that I like to look it all up in some of those large books, and in that way I can learn a great deal. I can say that the Hartford Public Library is a great help to me.

In school we have read the Merchant of Venice which I think is very interesting and is written in such a way as we can fully understand it and made plainer to us than most of Shakespeare's books as they are very hard to understand and hard for one to get interested in. We have also read the Adventures of Ulysses, a book that is like a fairy story and yet is very interesting. I go to the reading room quite often to read the comical and daily papers and the magazines which are a great benefit to all and especially to those who cannot afford to have them at their home. The reference room is a grand thing especially for us school children where we can go and look up for our school work and our debates.

I appreciate the books which I take from the Hartford Free Library, and also the fine selection of books that are kept there, such Jacob Abbott's, Victor Hugo's Les Misérables and Sir Walter Scott's works. And for light reading, Kirk Munroe's Dorymates, Campmates, Canoemates, Derrick Sterling and Prince Dusty, also Henty's works. I also use the reading room Saturdays and other spare time to look at *Scribner's Magazine*, *Harper's* and *Godey's Magazine*, also the daily papers such as the *Springfield Republican*, *Boston Herald*, and *Waterbury American*.

I like histories and adventure more than any other books. I spend about five hours a week in the reading room, but seldom go into the reference room. I think the Hartford Library is a good thing, because there are many boys like myself that never got a chance to read a book before this library was started.

My favorite books are *Ramona*, Longfellow's poems, *Beginnings of New England*, Fiske's *History of the United States*, and Miss Alcott's works.

I like the *Talisman* very much. In fact I like all of Scott's works. I like the *Talisman* because it tells so much about Richard the Lion-hearted and the Crusades. I like it because it is a regular history put in story form, and I like history very much. It has helped me a good deal, for when we were studying English history last year I knew a good deal more than some of the others about the Crusades. I like *Evangeline* very much and although I usually detest sad stories, that one was different from anything I ever read. Something compelled me to read on, and the poetry was so sweet and sad, and so much like real life that I almost cried for sympathy.

I do not care much for historical reading and do not like books by Henty and Ellis. I like Scott in *Lady of the Lake*, and tried to read *Ivanhoe* but could not get interested in it.

I have used the Library for about two years but not very often, but since I am in room 22 I have used it more than all the rest of the two years put together. I enjoy going to the reference room most of all, because I can use the books to make my school essays.

I use the Britannica Encyclopaedia very much, but some Roman letters in the books confuse me. I think the reference room is the best place to go to for scholars of the higher grades to get their school information. I have also used the reading-room and I enjoy reading *St. Nicholas*, and like to look over *Puck's* and *Fudge's* picture books, and other papers and magazines.

I read many books of which the invasion of Burgoyne, in 1776, was helpful to me because in the examination many questions were asked about it, and I, getting a thorough description of it, was very high in average. Two weeks ago, when I had to hand in an essay on Jupiter, I was obliged to go the reference room in the library from which I made out a good description of the planet.

I have taken several books but none were so interesting to me as *The Talking Leaves*. It gives me thoughts of early settlements, thrilling adventures, and of the Indians, their rambles and sports.

I have never drawn books for myself from the library but our school has drawn Robinson Crusoe and the Courtship of Miles Standish, which were the most interesting books I ever read.

I enjoy going to the reading room to look at *Puck* and other magazines. I go there and have a delightful time. I think it is a good thing to have a free library because it teaches people to read who don't know how. The Watkinson Library upstairs is useful. I have been there to get books about Washington and they gave me two or three about him.

The book I most liked was the book *Tim and Tip*. The History of New England is fine, telling about the Salem witchcraft. I like the *Blue Jackets* of 1776, 1812, 1861. Another fine book is *Two Years Before the Mast*, also *Life on a Man-of-War*, *King Tom the Runaway*, and *History of New York*, are interesting. The reference room contains fine books, encyclopaedias, and in the reading room I look at the *London News*.

The most interesting thing or book I read was the History of the United States. The reason I was so interested in it was because I love to see my native country win a battle. From this book I learned many good things. The most interesting fact was the battle of Bunker Hill. I enjoyed this very much till I came to the end, where it said, "The Americans lost and the British won." But the Americans won at Yorktown, so I was happy again.

Since I have profited by taking books from the Hartford Public Library I think it is my duty to thank you. I have had a great deal of pleasure in reading some of your books. I liked best of all the books I ever read, *Eyebright*. I liked it so well because *Eyebright* was so calm and brave. I also liked L. M. Alcott's books. When I finished the book I always wished it would never end. The best book I read of L. M. Alcott's was *Little Women*. The Hartford Public Library has been a great help to some poor people, who would like to read a book and could not afford it. I am sure that I liked every book I ever drew. I read the story of *Sara Crewe* which was very interesting. I

often went to the reference room to begin the book that I drew from the library.

I have drawn books from your library, and I was very interested in the American history because I love to read of the dear old patriotic men. There was one man that I was very interested in. That was Benjamin Franklin. When he was a boy there was no public library as there is now, but he ate bread and potatoes to save money and buy books to read. If they don't think so they better read the life of the great patriot man Benjamin Franklin. I think in those days there were people smarter than there are now.

The favorite book of the list is Uncle Tom's Cabin. I like the book for its historical part, its interesting part, and for its characters. I like Uncle Tom for being so truthful, kind, and faithful. He shows his faithfulness at the very beginning of the story, when he is told that he was sold to Haley, he might have run away if it were not for his faithfulness. He showed his kind feelings to Eva always. I liked Eva for her kind, gentle, and truthful spirit. She showed all these good habits by taking such interest in the negroes. I liked Mr. St. Clair for being so kind to his dear little daughter.

I liked the American Revolution and Standish of Standish very much. The American Revolution gave a full account of that war. There is no more interesting and full account of the Revolution than this one. It tells of many important things that are not in a regular history. It begins with the causes of the war, and tells them plainly, so you can understand them.

Standish of Standish is also one of the most interesting books. It is on the early life of the colonists who settled Plymouth. It is a true story. Although very interesting it gives the true life of the colonists. All of Henty's books are good being not only historical but very interesting.

I enjoy the library very much, and am glad there are so many nice and useful books on entomology. I have enjoyed the books on lepidoptera very much. I also enjoy the Watkinson Library, and the books there on lepidoptera. My favorite book in the Watkinson library is Scudder's Butterflies of the eastern United States and Canada. The reason I like that book best is because it has such nice plates illustrating the eggs, the larva in various stages, the nests of the larva, the pupa, etc. It also contains such useful and interesting accounts of the habits and life history of the butterflies. The books at the library have been a great help to me in my study of lepidoptera, they have also given me many useful hints that have helped me greatly in my collection.

I have only read two books during the past year, one of them the life of Israel Putnam, and the other the Building of Rome. I don't know the name of the authors. The favorite was Israel Putnam and two Roman brothers (most spoken of). I like Israel Putnam on account of his bravery, and Roman brothers on account of the trouble of building Rome. I made a friend with one Roman brother who was trying to build his city on the top of a hill to make it look grand. The brothers had war between themselves

and the only way they could settle it was to get the wives of the Romans on one hill, and then they knew they were safe. The book I favored was the History of Rome.

Four of the principal books I have read are Homer's *Odyssey* by Pope, *Tales from Euripides* by Witt, *Pickwick Papers* by Thackeray, (Dickens), and *Recollections of a Private* by Warren Lee Goss. My two favorites were Homer's *Odyssey*, and *Pickwick Papers*. I liked the *Odyssey* because it made a better impression of Greek life and travelling. It brings out many of the myths of Greece which originated long before this. I think that Ulysses suffered more than any man in Greece at that time. As to Homer's way of putting the story I think it cannot be beat by anybody. The fluency of language, and his beautiful way of describing the story, has never been equaled. *Pickwick Papers* is the best book I have read under Thackeray's (Dickens's) list. It describes the life of English people about fifty years ago. Sam Weller's wise sayings made me shake with laughter. Mrs. Bardell's case against Mr. Pickwick in which Sergeant Buzfuz's speech is delivered is another species of Thackeray's wit. I made friends with Ulysses and Penelope for their patient endurance, and I also made friends with Telemachus and the swain Eumæus for their faithfulness. I made friends with Mr. Weller, and no one could help doing so for his excellent wit. I also made friends with Mr. Pickwick for being such a gentle, ancient, and comical old man.

V.

WHAT MORE CAN THE AMERICAN COLLEGE DO TO HELP AMERICAN LIFE?

BY REV. CHARLES F. THWING, LL. D., PRESIDENT OF WESTERN RESERVE UNIVERSITY AND ADELBERT COLLEGE.

How far the American college has helped American life is one of those general questions which can receive only a general answer. I sometimes am led to believe that the influence of the American college has gone through all the ranges of the manifold and diverse life of America. I am at times also compelled to think that the influence of the college has touched only the higher and the more scholarly relations. It has helped to train one third of all our statesmen; more than a third of our best authors; almost a half of our distinguished physicians; fully one half of our lawyers; more than a half of our best clergymen, and considerably more than half of our most conspicuous educators. So far as the influence of these leaders in national life has entered into the life of the people so far has the life of the college become a vital force in American character. Therefore it must be confessed that the college has vastly influenced America. Such is the record of the past. What can the American college now do to influence the national character in the present and in the future? This is the question which I wish to study with you: the question What

more can the American college do than it is now doing to help American life?

The college has stood and still stands for the things of the mind. In a material world it represents that which is not material. The college can do nothing more worthy of its high quest than still remaining as the embodiment of this spiritual purpose.

The college is now beset in representing this spiritual aid by two opposite forces. They are both material forces, born of a material age.

One difficulty that besets the college in the maintenance of this lofty purpose is the athletic interest. The college has not become a base-ball field, or a football field, or a race course to that extent to which the people believe it has fallen. Certain colleges are quite free from this evil drift, but in other colleges the athletic movement has become a craze; a frenzy; a madness. The origin of the movement is not hard to trace and the origin is in many respects worthy. The college stands for things of the mind, but the mind as we know is located in a body. The mind thus placed seldom works well unless the body is in health. A body is seldom in health without exercise. Exercise to be the most healthful must be taken in joy. One method by which joyous exercise is promoted is competition. Therefore competitive exercise results from a method of keeping the mind vigorous for its work. But exercise that is used as a means very easily takes to itself the interest which attaches to the end for which the service is used; and when exercise in college becomes an end athletics have become an evil. This movement in the college is contemporan-

eous with the athletic movement of the whole American people ; a movement which is of tremendous significance for the health of the peoples yet unborn. Now the college has set before itself a very important problem of keeping athletics in the college vigorous as a means but of crushing out athletics as an end. Through athletics as a means and agency the college may still maintain its place as standing for things of the mind, but whenever athletics become an absolute good then the college ceases to be a mental and spiritual agency and takes its place with the materialisms of a material time.

I do not apprehend that the difficulties which certain colleges meet with in the proper administration of these athletic interests are to become wide-spread or to remain lasting. College men are on the whole sensible fellows, and the parents of college men are on the whole sensible, and we are soon to find athletics assuming their proper place in the whole work of the whole college, whose purpose is to train the whole man.

But a difficulty far more serious opposing the intellectual purpose of the college lies in the increasing luxury of college living. The age is a luxurious age and the college cannot but be sympathetic with the age, but the college seems in a sense to be leading in the luxuriousness of the life of the age. The scholar has not in the past been distinguished for the elegance of his environment. The scholar has been a pretty independent being, but he has been independent not because he had much, but because he needed but little. You know that the laws of begging were in the

middle ages suspended in behalf of the scholars. The scholars walked from all Europe—thirty thousand of them—to Paris to hear Abelard, and they begged their way as they came in pursuit of knowledge. When the magnificent Earl of Essex was sent to Cambridge, in Elizabeth's time, his guardians provided him with a side-table covered with green baize, a truckle-bed, half a dozen chairs, and a wash hand basin—the cost of all was about five pounds. ("St. Andrews' Rectorial Addresses," page 90.) But to-day the furnishing of the room of many a student in many American colleges is many times five pounds.

The English and American people—the most luxurious of all peoples on the face of the earth—have allowed their luxurious habits to pervade their universities and their colleges. Luxury has not gone into Edinburg and Glasgow and Aberdeen and St. Andrews as it has into Cambridge, and New Haven, or Oxford. The German student, too, is still a student, like the German nation, of great economy and simplicity in manner of living. I cannot but believe that the American college should be made as little sympathetic as possible with the luxuriousness of American living.

There should be one place in a democratic country where men are measured, and men are influential not by their wealth, not by the elegance of their bed-chambers or the splendor of their raiment, but by simple and sheer character. I cannot doubt but that the influence of the two great and ancient universities of England would have been far greater in English life if the method of living of the students had been simple,

plain, severe. Oxford and Cambridge have had a tremendous influence in training men for the upper realm of professional and social, of the theological and civil, life, but neither has had a large influence in the great community of the people. I believe that one cause of the influence of Leipsic and of Berlin, of Bonn, and of Munich in the life of the German people has been the simplicity and plainness of the life of the student. I believe that the influence of the American college would be magnified and deepened in the community if the life of the student in the college was more plain and more simple.

Let the living not be high ; let the thinking not be plain ; let there be cultivated much philosophy on a little oat-meal. I know very well that in certain colleges the life is plain, too plain ; it lies at the other extreme of the scale of luxury ; it is too bare and it is barren ; it is remote from humanising and cultivating influences. Men are herded and dwell in surroundings that have none of the comforts of home ; such conditions are quite as evil as the evil that arises from luxuriousness of environment. But such barrenness is not to our peril. Our peril is that increasing luxury shall result in diminishing intellectuality. Our peril is that the college will come to be the home of the rich and the dwelling-place of the magnificent. Our peril is that in this condition the college will not and cannot stand for things of the mind. But *for things of the mind the college must stand*. In the age of homespun of our fathers the college did stand for things of the mind ; in the age of broadcloth the college must still thus stand.

The bishop of the wealthiest diocese in America has lately written me as follows: "If I were disposed to challenge the American college as of to-day on any ground, it would be because of its tendency to descend from the loftier level of 'plain living and high thinking,' which was the characteristic of college life a generation ago. The passion for building, endowments, material enrichment, in one word, is likely to smother the love of learning and to discourage simple tastes. If we can recover the spirit which educates in young men a love of learning for its own sake, and which teaches them that *character* is of incomparably more consequence than *belongings*, the college of to-day will will do them the best service."

I have no doubt but that the American college will, despite the increasing luxury of American life, still be able to maintain the scholastic ideals. I have no doubt but that the American college, despite the vigor of athletic interests, will be able to maintain its intellectual methods and purposes, but the peril does exist and must be crushed. The college to bless American life as it ought must stand for things of the mind.

The college may further help the life of the nation through an intelligent and sympathetic treatment of all sociological questions. There can be no doubt but that the twentieth century is to be a sociological century. The eighteenth century was a theological one, the nineteenth has been a scientific one, and the twentieth is to be a sociological age. From God to nature, from nature to man is the progress. The college is the most important agency in this progress.

For this great being that we call the community is

an organism of very delicate functions. To endeavor to correct any one part which may be out of order may result in harm to a dozen other faculties. Therefore great wisdom is needed in the treatment. If it is only the trained physician who should minister to body diseased, if it is only the trained physician who should minister to the mind diseased, it is also only one well trained who should minister to the diseased of the community of both mind and body. The man who is called the practical man is not by any means the best fitted to deal with the ills of the community. It is the man who is at once practical in his aims and scientific in his training who is the best fitted. Professor Von Helmholtz was two years ago in New York. No man was more distinguished in his great specialty than Professor Von Helmholtz. He passed his entire career in a university. No man has in recent times made a more important invention than Alexander Graham Bell. Mr. Bell said to Professor Von Helmholtz that the invention of the telephone rested absolutely upon and was suggested by the discoveries of Von Helmholtz in relation to the laws of sound. Likewise the practical methods and practical agencies for benefiting humanity must rest upon scientific considerations. If they are not made thus to rest, the application of those methods may result in disaster.

One of the masters of this great subject, Carroll D. Wright, writes me as follows: "I think that the departments of political economy, as usually conducted in colleges and universities, rather antagonize the public at large, and this has done something towards creating more or less strained feeling between universi-

ties and the working men in particular. They (the working men) find that political economy is not adequate to the solution of the questions which they raise. Students, generally, find this true also, and that while political economy cannot and ought not to be ignored, there is something deeper and more vital concerning the relations in life than political economy teaches; so ethics comes in to supplement, or rather to complement, the teachings of political economy. To my own mind, if colleges and universities would broaden their economic work they would do something to aid American life as it appears to us at the present time. I would not in any way abridge the academic work of colleges, but I would extend the elective studies and bring the college into more intimate relations with the people themselves." In one word,—make the college vital—vital in giving wisdom for the solving of the great social problems, vital in having these problems pressed home to itself.

The college further may aid the national life by the presentation of a Christianity which is rationally intense without being sectarian. I assume that what is called Christianity represents a system of Divine truth. This system has in many periods of history been presented as a system, the belief in which was bought by too heavy an intellectual price, demands of the intellect much to be silenced. It has also in certain periods of history been presented as a system designed for the intellect, but which has become divested of some of its most significant and sublime truths. In the one case enthusiasms for it have been purchased by the barter of intellectual loyalty, in the other case intellectual

loyalty to it has been purchased by the sale of its enthusiasms. Christianity as a system should be presented in the college as a system at once rational and calling for the intense loyalty of the adherent. It also should be seen as a system so broad that no church of usual limitations can embrace it; so high that only humanity in its largest aspirations can make any approach to the attainment of its relative truth; and so fundamental to the nature of man that no set or sect of men can make any attempt to place their own trade-mark upon it. Where in all humanity should we find a type of Christianity at once broad without being superficial, and deep without being narrow, and high without being arbitrary, as among the scholars and the students of the American college. Not only righteousness of life and the unity of faith should be conserved in the college but also breadth of the spirit and earnestness of the heart and strength of the will.

American life suffers from the divisions of the one great triumphant church which is a partial embodiment of the Christian system. Personal force is wasted through denominational divisions. American life is bare because there is so little of the church and so many of the churches. Let the college embody the unity of the faith in the union of believers who are trained in intellect and warm in heart.

The fourth method by which the college may bless American life is through the inculcation and illustration of a broad and high patriotism. No sympathy is the college to have with that sentiment which cries, "My country right, or wrong." No sympathy is the college to have with that kind of patriotic love which

is bought by the destruction of other nations. The college is to have the keenest sympathy with every endeavor to promote a love for that nation into which one was born, of which he forms a part, and in whose soil his own dust becomes dust itself. America ought to be the best nation of the future. In humble pride we may plume ourselves upon what has been done and upon what we are able to do. Not in a vain, braggart boasting may we think of the past or anticipate the future. For a nation that has in the hundred years of its national existence done what the American has done for civilization may be humbly proud. When we take up the book of our illustrious ones there are few names which we cannot worthily write by the side of the names of the greatest. A nation which has given to law and jurisprudence Marshall and Jay and David Dudley Field, to education Horace Mann and Hopkins, to government Washington and Lincoln, to generalship Grant and Lee, to romance Hawthorne and Cooper, to poetry Lowell and Longfellow and their associates, to preaching Brooks and Beecher, to statesmanship Webster, to finance Gallatin and Chase, to history Prescott and Parkman and Motley, to science Agassiz, Gray, Henry, and Dana, to diplomacy the Adamses and Jefferson, to architecture Richardson, to painting Hunt, Copley, and Inness, to journalism Greeley, to practical affairs Franklin, and to reformation Garrison and his associates; a nation which has given these names to the world in a hundred years is a nation that is worth loving, worth dying for, worth living for.

There is no nobler chapter in the history of the

American college than the chapter which tells in glowing phrase of the college boys who went forth from college hall to the camp; who marched from the commencement platforms to the field of battle. You may read the record of them in the Memorial hall at Cambridge and at Brunswick, and you may read the song memorial of them in the greatest poem written in America—the college boys who fought and some of whom died that we might have a country. It was not alone from the college of the North that these men went forth. I have read with eyes bedimmed with tears in the catalogues of the colleges of Virginia name after name upon page after page having the simple record, “wounded at Wilderness,” “killed at Manassee,” “killed at Cold Harbor.” Yes, North and South there came from the college heart the patriotic impulse to do loyal service for “my country.”

I know very well that it is sometimes said and very often thought that the scholar is not patriotic; that in the comprehensiveness of knowledge he loses intensity of conviction; that in loving humanity he does not love the brothers of his own soil as he ought. I heard the oration of Wendell Phillips delivered at the Phi Beta Kappa dinner at Cambridge in which he arraigned the American scholar for cowardice and indifference in the nation's crisis. But the best answer to the words of the orator was the four square tower, rising above the platform on which he spoke, that proclaimed to the world that our oldest college gladly gave her sons, and poured out her bluest blood for the salvation of the nation. Memorial hall with its tablets of white

marble inscribed with names in black of heroes was sufficient answer.

The American people love America. The love sometimes becomes braggadocio; but the American people in its love for America has often felt that it did not find a sympathetic heart in the bosom of the American college. The people have therefore felt themselves aloof from the college. The college should therefore inculcate love for the country; a patriotism which is broad and yet enthusiastic and vital; a patriotism which is high without boastfulness; a patriotism which is as deep as the instincts of the human heart. It is thus that the American college can bless American life. It is thus that the American college can lead the people in times of national crises into ways of strength, into ways of peace.

But for us to-day love for country comes and its focus is love for city. There was a great contest between nation's rights and states' rights; the nation's rights won. There is a great contest between city's rights and a ring's rights or a boss's rights, and the larger rights shall win. Good government for the American city represents the present field for patriotic love. Into this field the college should go. It should go in the person of the college settlement. It should go in the person of the college graduate in any profession or many professions. The recent years give a magnificent illustration of the entrance of one, a college graduate, once a college teacher, now a preacher, into the attempt to give an honest government to America's metropolis, and you may call his

name Charles H. Parkhurst; but, after all, it was the American college that helped to do the work, it was an American college president that helped to overthrow Tammany. For Dr. Parkhurst once wrote to me saying that the best thing Amherst College did for him was Julius H. Seelye.

I wish now to point out briefly two methods or conditions by which the American college can apply these principles or purposes to American life. One method is that the American college should have for its purpose, giving the best education to every girl or boy who desires it. There are many boys and girls who do not desire a college education. For them a college education means nothing. But there are thousands who desire an education. The chief difficulty is the expense. The cost of securing an education in the ordinary American college is greater than the ordinary American income for the course of four years. Higher education cannot be self-supporting. I also know very well that what costs nothing is regarded as worth nothing; but I should be glad to see the time come when the college education would be so cheap that every poor boy and girl could have it, and also to have it remain sufficiently high to make every boy and girl that does have it feel that it is of priceless worth. I should like every boy and girl to come to college and have the cost at its very lowest, and to have the rich boys and girls that come to college pay all that it does cost.

Another method through which the college can help American life, is through more vital teachings and teachers. Scholarship is a very precious thing, but

scholarship is not the most precious thing. Scholarship has too often been used as a single test as to the worth of a teacher. Scholarship should always be demanded of a teacher, but there is a thing more precious than scholarship and that is life; character. And the college should demand character of the highest type and life of the most vital force to be had from each one who attempts to lead the youth into paths of love, and light, and life. One of the great Americans of our time has written me as follows :

"I think it is a great mistake to make technical scholarship the chief test or rather the only test in the appointment of professors and teachers. We need in our college more men and women of vigorous and pronounced Christian character. There ought to be far more influence exercised by instructors over the lives of students. Young men and women often have their minds poisoned by scepticism and indifferentism, at a period when a director and more powerful Christian influence in college might have drawn their lives Christward."

I think also that the college should emphasize alertness to present things; a sense of vital consciousness of relationship of the present. These are conditions that should inhere in the college. The word academic should not mean academic. It ought to mean vital, forcible, personal. Let the college have or not have noble buildings, but let it be vital. Let the students adopt or refuse adopting some academic customs or costumes, but let the college be vital. Let the college be in the city with all the magnificent and manifold life of the metropolis beating about it and beating

into it, or let the college be in the country with all the benedictions and beneficences of nature speaking silently into the receptive mind and quiet heart, but let the college be vital. Let the college be splendid and magnificent in equipment and its laboratories commensurate with all the life of nature, let its libraries be the accumulation of the wisdom of man, but let the college be vital itself in teacher and student. Let the college have a glorious past, a past of great moment like Oxford's, a past of great men like that of Cambridge, or let the college be unknown ; but let the college now be vital in every part of its being. Life, life, life. That let the college stand for, that let the college be.

VI.

MODIFICATIONS OF THE COURSE OF STUDY

BY C. F. CARROLL, SUPERINTENDENT OF SCHOOLS, WORCESTER.

A course of study suggests a set of topics and sub-topics with the amount of work to be done, within a year or a term. For many years, one system of schools copied from another till general uniformity prevailed in courses of study. Recently, state legislatures have enacted laws requiring the introduction of many new subjects. Much has been eliminated from common school subjects, and only essentials are supposed to be taught in our most progressive cities. The Committee of Ten proposed extensive modifications, working from the top of the system. The Committee of Fifteen attempted to state the case, but evidently did not go far enough to please the more radical leaders of the teaching profession. There has been a steady progress in public sentiment, but teachers still look for a theory that we can unite upon as a working basis.

While committees and individuals have been industriously tinkering at the ill-formed, ill-proportioned conglomerate, that we call a course of study, a great company of scientific men and artist teachers have been quietly studying the foundations of human development. These men and women are investigators, and constantly furnish new and interesting data.

Psychologists have shown that extensive correspondences exist between the brain and the world outside. The brain, they affirm, is a complicated machine, different sections being designed to register certain impressions and to originate corresponding muscular movements. Psychologists start from this point and prove that all that is habitual is due to the action of the reflex arc and is incorporated, indissolubly, into the muscular system. They also tell us that feeling or emotion is the spring of all mental life. Pedagogical writers, long ago, emphasized the importance of the emotions, in both drill work, or mechanical education, and in the larger and broader lines that make more for intelligence.

Elementary teachers have seized upon this physiological basis, and have entirely transformed the school-room. Not only have the form and methods been changed, but the content has been indefinitely enlarged. Reading, for example, is not taught as an end or chiefly as an accomplishment, but is made to afford delight and furnish general information. This larger view of reading affects the moral and physical life, and evidently brings into view all varieties of knowledge.

Kindergartners have entirely broken loose from tradition, and have sought suggestion in the child's physical nature, in all that they do. The kindergartner studies the child's inclinations, strengthens carefully all his best impulses, makes use of his instincts, for instance, his love of play, his curiosity and love of knowledge, his sympathy, his sense of reverence, his constructive and inventive passion, his fancy, his sense of proportion and harmony; in short, she calls into use,

in all these directions, his enormous energy and activity of body.

Our scientists have gone much further, and have studied heredity and race tendencies. They have opened up the possibilities and limitations of acquirement, and are in a fair way to solve many questions relating to methods of teaching. They have helped to determine that education begins very early, a most important discovery. They have shown that the best part of early education is not in books, that the child must get at all items of information through the concrete, and that education and physical development are often synonymous terms. The formal and technical are fatal to the natural and spontaneous, and the former is banished largely from even the primary room.

In the kindergarten, the child attains a knowledge of measurement, of order, of harmony in seeing and hearing. He knows a discord in color, he hums all day the melody that springs from the rhythm in his soul. We have no choice, here. The community are taking a hand. Women have appropriated this field and insist upon a hearing, as a matter of course. If the school board fails to act, women's clubs soon bring this body into line. The churches open kindergartens, and verily the life of the child is universally regarded as more than raiment, the moral and emotional more than the technical and formal.

The course of study must be an outgrowth of these conditions, an incident of only secondary importance. No logical course of study, framed by some men learned in abstractions, can much longer be imposed upon the delicate and sensitive organism of a child instinct with

a multitude of strong and noble impulses, that are so often crushed under this heavy millstone.

We do not yet dare to estimate how the kindergarten and other allied forms of sense and muscular training combined, will affect the course of study. Certainly when children have all received ideal kindergarten training between the ages of three and six years, we shall have a being with a capacity vastly increased over that of the present child of this age. Our makers of courses of study who figure most, have not, apparently, given much attention to the scientific questions involved in the beginnings of physical development.

Universities have been founded, giving a large share of their attention to the study of childhood and children. Departments of pedagogy and physiological psychology have been organized in connection with most of the leading colleges and universities of the country. These departments have been among the most attractive in the universities of Germany, France, and Switzerland, for many years. The kindergarten and all concrete teaching are the direct outcome of the study of the child physical, as are also the industrial forms of education, which grow out of, and are best illustrated in, the kindergarten.

CULTURE DEMANDED BY MODERN LIFE.

It has been affirmed, very properly, that courses of study must be framed with reference to the culture demanded by modern life. Modern society, using this term in its best sense, represents the learning, the refinement and tastes, and the good morals of the day.

The first implies intelligence, and may, or may not, include the extreme specialist. It is certain, that to be a specialist is not enough to insure a man a place in the best society. A man must know nature, he must know the world, he must know books, and must be able to meet and to gain the confidence of his fellows. Acting upon these principles, we find teachers bringing nature into the school-room, and taking frequent excursions into nature outside. This practice has taken fast hold upon every representative primary teacher in the land. These same teachers give to the school-room the flavor of the modern home, by creating a conversational spirit, and immediately lead their children into the rich fields of literature and language.

The new importance given to the study of our own tongue, and to the world of nature and of history, are not educational fads, but a part of an irresistible, instinctive movement to bring the child immediately into touch and sympathy with his environment.

The study of drawing, singing, and the new value put upon teachers of good taste and refinement, have taken away the best argument in favor of private schools. Montaigne and Locke held rightly, that we are best educated by coming into close contact with a gentleman, and the Greeks carefully shielded their children from the sight or sound of all that was coarse or vulgar. In most of our great cities, the public schools are thought to be good enough for the child intended to be fitted for the highest citizenship. School houses are, as built at present, an education, and works of art in plain sight will, ere long, be made a part of the course of study. In many schools, the

decorations are carefully studied during a given period in each year.

As for good morals, high-minded teachers are found everywhere, and the training of the ideal public school is coming to be the best training for the church. As parents, we can testify that Christian teachers have insensibly led our children into the possession of the rarest Christian graces. It is but a step from the school-room into the secondary school and the church. The home, the secondary school, and the Christian church are at one, both in sentiment and methods.

The course of study must be so far modified as to give free play to imperative demands of the home, that matter and method shall contribute to promote the highest moral well-being of every child.

PRACTICAL EDUCATION.

The course of study is being further modified by the introduction of manual training and physical training. Manual training immediately increases the resources of a boy or girl. The boy who can handle tools and convert raw materials into a finished product, has ideas to correspond. Such a boy always knows how to do the kind of work that we must meet in life. This boy can express himself in the concrete. He will always find something to do. Labor that is to his taste has a fascination for him. A good mechanic and a good farmer are always interesting in conversation.

A boy who has had a good training with tools insists upon having a workshop at home. He co-ordinates this shop with all his boyhood and young manhood

life. The girl is to be pitied who has not a genuine interest in the domestic affairs of her home—in sewing, in cooking, and in ordering the affairs of everyday life of the household. Boys and girls are always happy, and cheerful, and useful, if they know how to use their hands. Without these acquirements in good measure, they will fret, and pine, and have wrong views of life, and can be but half educated.

Manual training is not a thing to be added to the high school course, for it is a part of the normal development of a child, every day, from infancy. There should be no break between the kindergarten and the high school. What is good for the kindergarten and what is good for the high school student, must be an advantage to the pupil of intervening grades. If we were to enter more into detail, it should be said that many subjects now in the curriculum call for a certain amount of manipulation; for example, geometry, physics, writing and drawing. The natural activity and tendency to movement of every child also call for the continuation of the hand work of the kindergarten. If it is true, as psychologists affirm, that every sensation has a tendency to express itself in movement, this fact in itself is a conclusive argument that, at least for a part of each day, the hand should be put to some good use in connection with nearly every subject. Teachers of manual training bear unanimous testimony to the moral value of manual exercise, and to its influence in favor of the self-direction of children.

But the final and strongest argument in favor of this practical form of education in the lower grades, is found in the fact that a large majority of children leave school

before they reach high school age, and that, if manual training contributes either to intellectual development or to material advancement in later life, it must be regarded as a prime necessity. However far we may accept the extreme claims of manual training advocates, it is certain that the industrial community will expect this subject to be largely represented in the public schools. The legislature of Massachusetts has, in recent years, determined that this, and many other kindred subjects, shall be taught, and the curriculum of the future must be studied and ordered with this public sentiment in mind.

Physical training is also of practical value in the fact that the physical organism may be as regularly and as successfully strengthened by systematic training. Good health depends entirely upon nutrition and exercise, and nutrition must fail unless the exercise is sufficient and timely. Under the strain of school life, digestion is disordered and the natural movements of the brain and the natural elasticity of the muscles are impaired without full, and frequent, and systematic physical effort. The whole tendency of city life has long been artificial, and the reaction in favor of all kinds of outdoor sports is natural and universal. Almost every city school system in the country has adopted some form of physical exercise, and the subject plainly demands general recognition. I have already referred to physical science and will only add further that, as our nation leads in discovery and invention, and holds a high place as a producer, the science upon which our success is so largely dependent cannot long be neglected in the school curriculum.

ORDER OF SUBJECTS.

In the preceding part of this paper, I have not attempted to treat of all common school subjects nor to treat exhaustively of any. I have no desire to attempt to present a program or to give suggestions that would help to this end. In my judgment we have wasted time at this business, and, most of all, we need to study the principles of development as illustrated in the children themselves.

As has already appeared, I should recommend that we begin such a study with infancy, and that it be based largely upon physiology. I have suggested this because those who have taught best and have spoken most wisely, have been students of so much of the science of education as has been brought to our view in this direction. I do not mean by this that we have not a comfortable and practical working curriculum. It is evident, however, that what we most need is more evidence from the school rooms and laboratories of the artist teachers and scientists who command our highest confidence. The question as to how early French, or Latin, or geometry, or physics, or manual training may be introduced, can never be answered by philosophers. Actual experience is the only test. When these tests are more general, we shall be wiser and have clearer convictions, and the public heralds of education will talk less and think more.

If it were to be said in this audience, to-day, that geometry, physics and chemistry, and manual training could and should be taught from the very beginning, many who talk most on education would pro-

nounce such a theory not only impracticable but impossible, and yet there are thousands of teachers in this country who are quietly and successfully introducing the elements of all these subjects into every grade of school work.

But notwithstanding that the task of making a course of study at this period is both a profitless and a thankless one, it is a perfectly simple proposition that we ought always to indicate, in each subject, what may be regarded as a minimum of essentials. We have learned to distrust what is sometimes called a logical order of development. Certainly when such an order is written upon paper, it frequently becomes a laughing stock among teachers. Witness, for example, the present course of instruction in arithmetic. Common fractions and mensuration, in the middle and at the end of the book, have become playthings in the hands of skillful teachers in the first grade. The same is true of geography, and the order followed by recent authors in this subject is a startling reproof to advocates of the logical order.

It is well, I repeat, that each teacher should master the essentials of a subject with proper details. There are so many things that must be done. One system and one particular school may prefer and demand a plan, but woe to the system or to the school which leaves to the teacher the barren opportunity of mastering set forms of words and forbids the introduction of any but given topics, or declares the number of pages to be covered in one year.

The so-called graded system has been the heaviest millstone ever hung upon the struggling teacher. It

has not only killed her enthusiasm but has destroyed all chance of originality. It has destined the quick and the slow to mark time together. It has held back the advancement of the one and prodded into fruitless and spiritless effort the other. No tendency to-day is more marked than that to break loose from this monstrous deformity.

In many school systems in New England, even the advanced grades are divided into so many parts as will enable a group of pupils to work harmoniously and naturally, and they all move faster or slower as the case may demand. This of course kills, as it ought to, the grade limit scheme, and any pretence at maintaining it is only a farce.

The true theory of grading, and the only intelligent theory, is that every principal or superintendent should, with each teacher, make a careful study, in advance, of what, in each class, ought to be done for a month, or three months, or five months to come. The time covered by this estimate is not important, but it is of vital importance that each knows the topics that ought to be covered by this class in the immediate future. It may please the fancy to estimate what the class may do, it may assist the teacher, but it should in fact have only the slightest influence upon the effort of any skillful teacher. It is an insult to her intelligence to direct her as to how much ground to cover. When it is assumed that fifty classes in the fourth grade, in any city, can do the same thing in one year, we propose an absurdity. The reasons for this I will not attempt to explain to this intelligent audience. I will only say that fifty classes never did accomplish the same work

in the same time. If they have been made to appear to do this, we ascertain upon inquiry that a fraction of them may have mastered certain facts, but the needs of individual children have not been considered. As a consequence, scores have been left behind in their vain attempt to accomplish what was out of their reach, and hundreds more have merely learned a form of words which is in reality a worse failure than to repeat a grade.

UNITY.

In the revision of the course of study that is in progress, provision should be made for more complete unity between the different parts of our systems. The study of literature affords an illustration. Hawthorne, Irving, Longfellow, Whittier, and Holmes are authors with whom the American child should be familiar. In a given high school, the pupils are found to be studying "Hiawatha," "Evangeline," "Snowbound," "The Wonder Book," "Rip Van Winkle," all in the first year. Enquiry shows that some of these children read all these in earlier years, and yet the teachers, anxious not to allow any pupil to pass out of their hands ignorant of these and other classic productions of the same authors, hurry over them as best they may.

Far be it from me to recommend that the study of these poets be set in an inflexible graded system such as I have so severely criticised. Yet it is evident that there is a serious waste of time and effort in the aimless method now generally followed. If, when children come to high school age, they were expected to be familiar with even half a dozen productions from each of our well known authors, the child would have

a rich store from which to draw, if he should leave school, as most children do at this point, and teachers in succeeding years would always have a working basis for the study of literature.

It might be agreed that given poems and essays should be mastered before any given year, or in connection with other subjects. The slightest improvement, here, would be a great gain. One excellent feature in this is that the high school instructors thus have something in common with teachers below them. This idea at once gives rise to the suggestion that the four years of high school are, or may become, but four years added to the eight years below with no break visible, so far as the study of literature is concerned.

If we were to extend our observations, we should find that many other subjects may be rearranged in the same way. Among these, are physics, chemistry, botany, physiology, geometry, history, and physical geography.

The high school is strictly an American institution. No such division as we make between grammar and high school is known abroad. Its influence has been bad in postponing much of the very best and most practical part of education until half its value is lost, and until all but a fraction of the pupils have left school. Many children never recover from the shock caused by passing from one part of our system to another. The subjects have been, until recently, entirely different, the methods of recitation, and oversight, and discipline are wholly changed. With no teacher as a personal friend and adviser, and a wholly new order, many silently and sorrowfully leave the

place for which they have toiled so long. It is to be feared that sometimes, in spite of the best intentions, the high school teacher deliberately consents to the system of the survival of the fittest. The system is largely responsible. Pupils are wholly at a disadvantage. They appear and feel humiliated by their apparent ignorance. There are no connecting links, there is nothing to their credit. Nothing more unphilosophical could be contrived than the theory that one school is a preparation for another. Even the high school boy is on familiar ground when he enters college, but the grammar school child has brought absolutely nothing from eight years of study that serves him in his new life, unless it be the ability to read, write, and spell.

The problem before us is an interesting one, and unless it is solved speedily, the private school will have a new lease of life. It constantly happens that well-informed parents send their children to private schools, at the end of the seventh year of school, that they may escape the elaborate finishing process in grammar and arithmetic, and that they may sooner enter broader fields of learning.

METHODS AND TRAINING OF TEACHERS.

The course of study is constantly being affected, further, by improvements in methods, and by the training of teachers. The trained teacher who is fully up to date, would never think of using a text-book in arithmetic, in actually teaching any subject that it contains. The Grube method has already banished the primary arithmetic, and a skilled teacher

irresistibly presents the elements of common fractions, decimals, and percentage, all at one time. This teacher asks her class to read and to interpret the problems in the book, after she has taught the subject fully, at the blackboard.

As teacher, she takes the place of the book. She is ready with a thousand simple problems, that lead to the questions asked in the book. Mental arithmetic, or as we now say, oral questions, occupy three quarters of the recitation hour. When the subject is taught, under the inspiring illustrative method of this teacher, when her pupils follow her with great readiness in dealing with every elementary form of question belonging to the subject, they can answer every question that the book contains, but they owe no thanks to the book for this knowledge.

As a result, the time is reduced by one third or one half in teaching a given subject. I am not expressing a theory, but describing a growing practice among trained teachers, in this country. I hardly need to say that a teacher in Germany must always stand before his class without a text-book, and that the book is not considered a factor in teaching any subject in elementary form. In the hands of the ideal teacher, the teaching of grammar and geography will be subject to modifications not less marked than in arithmetic. It is not too much to affirm, that the best teachers in Portland would leave their profession rather than teach from a text-book. Many text-books are made, confessedly, for inferior teachers. The advancement of our educational system, and of our profession, depends upon training of teachers to teach a subject and

not a book. Let it be said that the text-book is an evolution, and that it will always meet the rising sentiment of the profession. We actually use more text-books, to-day, than ever before. They are in greater variety and startlingly different, but the number of books actually found in the room of the best teacher, is probably four-fold greater than it was ten years ago. Any careful consideration of the course of study, compels a superintendent to gauge his own standard as a supervisor, and to estimate the professional ability and the particular skill of his teaching force.

CONCLUSION.

Correlation of studies and departmental teaching, two much-discussed questions, have bearing upon my theme, but so little has actually been done in way of experiment in these lines, that we cannot at present formulate any well-defined principle. It does not, however, seem probable that the large acceptance of either would necessarily affect the subjects contained in our course of study. The order of many subjects would be changed, if one subject were to be used largely to assist in teaching another, or if the subject of geography, for example, were to be made only a convenience in teaching history, sociology, production, and commerce. But these topics can well wait their turn and time, and we shall certainly hear more of them later.

In this paper, I have asked without answering, the question, "What is a course of study, and what purpose does it serve?" I have attempted to show that we can trust the best desires and impulses in human

nature, in the education of children. I have insisted that we are bound to prepare children for society, that we are expected to teach them to strive successfully, in the great competition of the race. I tried to show that we weaken our schools by anything approaching a literal application of the graded course of study, and that interesting unsolved questions that may yield much gain, are before us for consideration. Within the last ten or fifteen years, our hands have been freed, but in this period we have been called upon to revise our methods, and to absorb much new material. Teaching means more than it did formerly. We recognize a different moral obligation to the child, to his home, and to society. It is especially necessary that we hold fast to foundations, that we do better work than ever before with the fewer topics that are assigned from the common school subjects, and that we leave to the advocates of the old order no chance to call in question the thoroughness of our work at these vital points.

Meanwhile, we rejoice in the chance to do more for humanity. We have or ought to have, a clear theory upon which we rest, and an experience, limited though it may be, that enables us to give a reason for the faith that is in us, a faith based upon the large inherited capacity of a human being, and upon the things that are already revealed.

VII.

DESIRABLE MODIFICATIONS OF ELEMENTARY SCHOOL PROGRAMS.

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From the time when the colonies of Massachusetts in 1642 began to legislate concerning education, simply insisting that all children should be educated in the precepts of religion, in reading and the catechism, to the present time, this question of the course of studies for the elementary schools has been under discussion in our country.

Among the early Greek educators Pythagoras surpassed the modern philosophers in his successful efforts at correlation and concentration, in that he grouped everything about a single centre, Harmony. Socrates extended this program sufficiently to include a what, a which, a why, and a wherefore.

The Utopian scheme of education in Plato's Republic recognizes three classes of persons and provides for a like number of systems of training; the classes are the philosophers, the soldiers, and the laborers, and each class is trained for its particular calling. Music and gymnastics are considered broad enough to cover all subjects taught in the schools, while the work or play in his infant school comes as near as can be imagined to the ideal of the modern kindergarten.

The Spartan boy was taught only athletics ; for the Athenian there were added to this program literature, music, and art ; the Romans prefixed rhetoric, or oratory, which they considered as the same thing.

The Hindus and Chinese were not afflicted as we are to-day, and have been on many similar occasions, for, as they never changed their program of study, there never was the necessity of discussing the desirable modifications of school programs ; the children were always taught just what their fathers were taught, no more, no less, ever the same.

The early fathers of the church omitted the classic studies of Greece and Rome, because they savored of Paganism and were so hostile to Christianity that they feared their influence upon the early converts ; but they had nothing to take the place of these studies. Charlemagne and Alfred the Great would have built up a system of education, including the principles of religion, ethics, and intellectual development, upon a broader foundation than had yet been laid. No successors were found worthy to carry out their plans.

The human mind began to be awakened from the sleep of the dark ages by the scholastics, who spent their time in the study and practice of reasoning by means of the syllogism, a kind of mental gymnastics. They had a method of philosophizing upon words and thoughts without examining the things themselves ; an easy way of making a show of education, while still lacking a knowledge of the facts they were handling in their syllogisms. The seven liberal arts of the middle ages, known as the trivium and quadrivium, constituted the acme of education for several centuries.

These were grammar (Latin of course, for there was no other), logic, and rhetoric; music, arithmetic, geometry, and astronomy.

From the time of the renaissance of education in the 16th century the discussion of the program for school studies has waxed warm. Montaigne, Comenius, and Rousseau would study the mind of the child and follow nature in arranging a course of studies. Antagonistic to this plan is that of Malebranche, who would abandon sense instruction for abstract truths; "then," he says, "we might teach children, from the moment they knew how to speak, the most difficult and the most abstract things, or at least the concrete mathematics and mechanics." The Jesuits had a single aim in their instruction, i. e., to make good Latinists of their students, and thereby to cultivate the elegancies of form and language, while the Jansenists disdained all formal culture and sought only the practical. In their distrust of human nature and fear of human pride they became moral pessimists.

Bacon, Locke, Arnold, Spencer, Page, Mann, Barnard, and Harris, with many others of the past and present, have each done well their part in solving the difficult problem, "What shall be taught in our public schools?" Gradually by a process of evolution the courses of study proposed by the leaders of thought and moulders of opinion in the past, so antagonistic at their inception, have converged to the single purpose of education, expressed so well by Plato of long ago,— "to give to the body and to the soul all the beauty and all the perfection of which they are capable." But this singleness of purpose has not necessarily ter-

minated in singleness of plan ; for our courses of study are as diversified as are the educational boards originating them. Many of these are, moreover, so complete and in such harmony with their environments that it seems almost impossible to better them with our present understanding of the needs of children and the processes of mental development. Others give such undue prominence to certain subjects and are so neglectful of others that they are out of all proportion, and no symmetrical structure of intellect or character can be founded upon them. In a course of study just now presented for the schools of my own state, no reference is made to physical culture or manual training, thus ignoring entirely the fact that children have bodies to be trained and developed. Music also has no place in the program of studies, a most important auxiliary in government and in the training of the moral nature. Nature studies in connection with geography have a place, but natural science as such, except in the case of physiology, is not found in the program of studies.

Many of us, if we had our schooling under the old district system, now understand that there was no harmony in our early education. We may in these later years have persuaded ourselves, from the amount of talk about courses of study and the new studies introduced into the schools of the larger towns, that the day of a dearth of studies has passed, but from long consideration of this subject and careful investigation I am convinced that more than half of the children of our land have nothing but the dryest, matter-of-fact text-book instruction, with no vitalizing power, be-

cause the life in the schoolroom has no connection with life outside.

As the child first enters the school he is too often exiled from all that has entered into his infant life. He is cut off from the familiar faces of home friends, the members of the family, his playmates, the domestic animals, the familiar scenes of home life, the gardens and lawns, the fields with their flowers, the running brooks full of interesting life to every child, the hills and valleys, the woods with their musical tenants in which every bush and tree, every leaf and flower, every insect, all nature excites and satisfies the curiosity of his inquiring mind.

Now his free and happy days are over, the school-house has caught him, he is a prisoner within its walls, sentenced to the hard labor of sitting still while there are paraded before his eyes words without ideas, sentences containing for him no thoughts, letters and figures with no meaning. Instead of the unity of home and school life there is left a deep chasm which time never completely fills. His school life and home life run on in parallel lines and do not form, as they should, a connected whole. But some may say this is not true for to-day; it was so once, now time has changed all this. In those schools which are under skilled supervision, a change for the better has been or is being made, but even in these many of the natural methods have become so artificial in their naturalness, from lack of knowledge, tact, and adaptability on the part of the teacher, that they seem but a travesty on nature, while in most schools without supervision, no attempt is made to rise above the old-time instruction

inherited from our forefathers, which began, continued, and culminated in the three "rs" with a few variations.

I have made inquiries of teachers and students from hundreds of different schools in the country towns, and in more than ninety per cent. of them no instruction in nature studies is ever given save that furnished in the text-books of physiology and geography. The child walks in the midst of nature with no knowledge of it save that which his own untutored mind has worked out. He has been taught nothing of the phenomena of the heavens above, the earth beneath, or the waters under the earth. With nature all around him, she is a stranger to him, and he to her. You will find these statements verified in many country schools.

In regard to nature study in city schools, the opinion expressed in the superintendent's report, concerning the course of study for the Chicago public schools, voices the sentiment of educators generally; it says,—

"The introduction of elementary science into the public schools will assist in breaking down the unnatural barriers which the artificial environments of city life have built up between the child and nature. This is not to be accomplished by discarding established studies, but through the intelligent application of them to subjects of thought in which children are by nature deeply interested.

"Experience has shown that when nature study has been used as the basis for early training in language and drawing, an interest in the other studies is easily secured and retained. The study of nature is a neces-

sary preparation for a full understanding of much that is beautiful and valuable in literature.

"Not as a preparation for real life, but for real life itself should the work of the schoolroom be planned. Life is never more real than it is in childhood, and from the beginning, the child must be kept in constant touch with those facts, phenomena, and forces, with which he must deal both as child and man."

It is indeed pitiful that the artificial environments of city life have built up unnatural barriers between the child and nature; it is still more pitiful that the child in the very midst of nature, a part of which he himself is, should have no knowledge of his environments, that having eyes he should see nothing, that having ears he should hear nothing of the harmonious sights and sounds of nature's blending. "'Tis true 'tis pity and pity 'tis 'tis true."

We had vividly portrayed at our last meeting by Miss Arnold, then of Minneapolis, under the topic, "Unification in Primary Work," an outline of the work done in the schools of her city under her supervision. In accordance with her plan nature studies adapted to the season formed the nucleus about which all the other work centered. The results of such lessons in creating an interest in school work may be summed up in these her words: "Their hearts are full of it because they love their work, and rejoice in what they have learned." The good effect of such an interest in developing mental and moral power and establishing character can be readily understood.

Can children in the country be as readily interested

in such studies, and is it possible to furnish opportunities? I will read part of a report that I asked my primary teacher of the training department of the Normal school to make out for me, a report concerning a little class of about a dozen pupils, five years old, who entered school for the first time about three months ago. She says: "The children have been in school nine weeks, and during that time have taken in number work all of the facts through five. In reading they have been taught the simple written sentences; the object words were represented and taught by objects. In writing the children copied words and sentences from the board, and also practised the single letters 'i,' 'u,' and 'w.' They have taken a number of the kindergarten gifts and the primary colors. In form study they have modeled the sphere and some of its modifications. For instruction in literature I have read to the children such rhymes and poems as 'Mother Goose,' 'The Brook,' etc. For influencing the moral nature such stories as 'Wiltse's Kindergarten Stories' have been read to them, and for inculcating a love for history, also for information, simple history stories.

"In language I have used mostly the natural objects such as flowers, insects, and other animals. We have studied the spider, snail, mud-turtle, birds, grass-hoppers, frogs, toads, caterpillars, butterflies, etc. The children have been greatly interested in the work and I have frequently found my desk covered with insects. One day after a talk on the butter-fly, a little girl came with a pail nearly full of caterpillars from the apple tree and several branches covered with them in her

hand and exclaimed, 'Oh, Miss Burr, won't we have a lot of butterflies if we keep these?' Another child said, 'I think I shall get a type-writer like papa's, then study butterflies and write a book about them.' Here is a description of a snail given by one of the little ones,—
'The snail has a soft body and it carries a shell on its back. It lives in wet places and sometimes under a rock. Their eyes are on the end of its feelers and when they want to go into the shell it rolls itself up.'

"This is a child's story after talking about the buttercup,—'I am a little buttercup and I live in the fields. I have a long green stem and green leaves and a yellow head. Little girls and boys like to pick me to see if they like butter.' Their other work has been made to radiate from this nature study as a centre, and the children have been contented and happy, for they have carried their out-of-door life into the school-room."

Contrast this kind of work carried on throughout the whole elementary course of study in so many schools all over our land with the pretense at instruction that was imposed upon many of us in our early days in the school-room, a relic of which remains not only in some of the out-of-the-way places of the earth, but occasionally is found in a community considering itself progressive and cultivated. (To be sure the old idea of what was good enough for our fathers is good enough for ourselves has been driven into the corners, or has given place to the better thought of "let us improve upon and develop what our fathers preserved and handed down to us.")

After more than two thousand years of fervent and

fruitful discussion of this question, after thousands of papers presented at all kinds of teachers' conventions, and tens of thousands of articles published in teachers' journals and elsewhere, it could hardly have been expected that any new thoughts would be presented here to-day.

I have sent for and examined the courses of study prescribed for the elementary schools in the larger cities from Maine to California, and certainly I find no lack in the number and variety of subjects pursued. The only query is, is life long enough for the pupil to pursue and gain any reasonable knowledge of the manifold subjects laid out in the course of study; yet they are all necessary for the mental furnishings of the youth and maiden fully equipped for the contingencies of life.

And while so many are complaining of the overcrowding of the courses of study in the public schools, every association for the advancement of temperance, purity, humanitarianism; science, art, and literature; physical culture, manual training; manners and morals; agriculture, horticulture and arbor culture; loyalty, patriotism and citizenship, are constantly petitioning teachers and the public generally to petition congress, or the general assembly, to introduce their particular hobby into the public schools, and are mortally offended if you do not enter into every wild scheme proposed with the same enthusiasm, and ride on the pillion of their hobby horse blindly with the same zeal with which they guide the animal.

A careful examination of the school reports from nearly a hundred of the largest cities, representing

every state in the Union, shows the greatest diversity in some things and a comparative agreement in others. With a few exceptions, music and drawing, English grammar and history, receive about the same attention in each course. Instruction in music is entirely omitted from the course of study in a few cities, one of which is Philadelphia, whose superintendent reports that no provision is made for maintaining it in the schools; he, however, places singing among the requirements of the primary grades, recognizing its value when properly conducted for "training the vocal organs, cultivating pure sentiment and social feeling among the pupils, and affording agreeable diversity to the occupations of the school."

In some cities physical training is disregarded, and apparently little or no attempt made to teach morals and manners; as if the child consisted of intellect alone, or as if that could be properly trained and developed without regard to the body for furnishing the means or the regulative faculty for controlling and directing.

The time allotted to natural science varies much; some authorities finding no place for it in the elementary schools, while others make it an important part of the work. Washington, D. C., gives to science the largest proportion of time, about one tenth of the entire elementary course. The plan for science instruction outlined twenty years ago by Dr. Harris for the schools of St. Louis is still commended by good authorities as feasible and practicable. Of this "spiral course" Dr. Harris says,—"The course should be sketched in such a way as to make several complete circuits during the

eight years of the district school course. The lowest one should seize certain striking features in each department, making a strong impression and silently determining the mind to reflection and observation in the domain of natural science. The second course must travel round in the same path, but more systematically and in detail. The third one, still deepening and generalizing the ideas of the pupil, would make the effects permanent. A pupil coming into any grade in the schools and remaining three years would know something of each of the great departments of nature."

The greatest diversity of opinion exists in regard to the time that should be spent upon arithmetic in a course of study. This theme has been most fruitful of discussion. The longest time assigned this branch of education in any city reported is in the schools of Wilmington, Del.; the shortest time in Seattle, Wash., which is only about one fifth of the time in Wilmington. The largest per cent. of school time given to arithmetic is in Richmond, Va., where one third of the time of the elementary course is devoted to this subject.

Now I question, with many others, whether arithmetic is of so much more importance than other studies, that it should engross one third, or even one fifth, of the student life of the majority of our race (for it is a small minority that enters the secondary schools).

The famous report of the committee of fifteen, made at the Cleveland meeting of superintendents in February of this year, has presented to the educators of

this country a course of study for the elementary schools, that in my opinion, with our present light as to the educational needs of the nineteenth century, cannot be greatly improved upon.

This committee recommends a course which is midway between the various extremes. It is similar to the result that would be obtained if the courses of a hundred of our representative cities were combined and averaged. This is as it should be and as we should expect from such a committee who carefully investigated and considered every phase of common school education.

They realized, as I have tried to show in this paper, that the course of study for our schools has had its growth from roots reaching deep down into the very foundations of our Christian civilization and older by far than our national existence. Men of sense do not attempt to tear up such a structure and build upon an entirely new foundation.

As must have been expected, this report upon a course of study could not be satisfactory to the extremists in any direction. The extreme Herbartians, contending for concentration and attempting to found the whole work of a year upon a single story, as Robinson Crusoe, would naturally desire that a committee of fifteen be appointed to revise this report.

So it is expected that the maker of grammars would desire more technical grammar; the mathematician, more arithmetic; the scientist, more science, and so on through the whole category of subjects.

And while the enthusiasts in particular lines of study do a noble work in arousing an interest in their

favorite branches, they are not as a rule content to yield equal deference to the opinion of others which they demand for themselves. Hence, if any committee through some supernatural agency, could present a report perfect in every particular, it would be by many sharply criticised and condemned.

If this report of the fifteen had not been freely discussed and severely criticised, the committee might well have considered their work a failure. The public, however, has given them no occasion to think so on this ground.

In regard to arithmetic I am in accord with the majority of the committee,—that with right methods and a wise use of the time in preparing the arithmetic lesson in and out of school, five years are sufficient for the study of mere arithmetic after the lessons in number of the first year. The time thus saved is wisely applied to science study and to general history and biography, to each department of which is assigned sixty minutes per week throughout the entire course of eight years' study.

In connection with the influence of biography upon character building it is of interest to recall a remark of Henry IV, who often read from "Plutarch's Lives," and claimed to receive great help from it; he said it was to him his conscience. He happily was more fortunate than some of the other Henrys in possessing a conscience.

Since it is impossible for any one man, or any body of men, to arrange a course of study acceptable to even a majority of educators it remains for each one of us to enlighten himself as far as possible upon the

demands of our own times and people, and to provide for the supply of those demands so far as the power within us lies.

We are all seekers after the truth ; we are searching for the best methods of presenting truth and the means for conveying necessary truths from mind to mind.

With this end in view, I propose as desirable modifications of elementary school programmes, less of arithmetic and more of nature study and science ; that music and physical culture have a place in every school programme, manual training in many ; that elocution, or the art of expression, be taught as an art, and applied to all expression of thought ; that general history, literature, and biography be taught in all schools as a means for general information and moral instruction.

There should also be a unification of the work of each grade, and of grade with grade, not only of the studies one with another, but the school life, home and social life of pupils in all grades should be unified and made complete, so as "to render the individual as much as possible an instrument of happiness, first to himself and next to other beings." Such changes I recommend, always keeping in mind that "the purpose of education is to give to the body and to the soul all the beauty and all the perfection of which they are capable."

VIII.

WHAT A GRAMMAR SCHOOL GRADUATE SHOULD KNOW AND BE ABLE TO DO.

BY L. S. HASTINGS, NASHUA, N. H.

In view of recent discussions, and the consequent unsettling of traditional opinion regarding the scope of primary education, it seems necessary by way of introduction to state what we mean by a grammar school graduate.

Without entering into a discussion of the question, what a grammar school is, or ought to be, in its organization, I will simply say that in this paper I shall consider the grammar school graduate to be a boy or girl who has finished the schooling which we demand of all our children—the minimum of preparation for the common work of the world and the duties of American citizenship, whether we fix the age at one limit or another, whether we call the highest grade of this universal course by one name or another.

In our public school system we have certain schools which we call *common* because they stand for that education which we demand for all; we have other schools which, though we offer them freely to all, we know must in the nature of things be to a greater or less degree the peculiar privilege of the more fortunate minority; these schools, which we call *secondary*, are

not only designed for older pupils but conducted by different methods and directed toward other aims than those which characterize the common schools.

Now what ought a pupil to know and what ought he to be able to do when he has finished this common or universal course?

Let me say first, that to the first part of my question, what the pupil should know, many varying and yet equally valid answers might be given. We should all agree, I suppose, that he should know the elementary facts of certain sciences, and we might agree pretty well what sciences should constitute this group, but your catalogue of these facts might contain more of this and less of that, and mine, less of this and more of that, and yet both of us be equally worthy of consideration.

Let me say next, that in affirming that a pupil should be *able to do* a certain thing it is implied that he should *know* certain things. With reference to writing, to take a very simple illustration, the child must know what the correct forms of the letters are, or he cannot make them, though, of course, he may know the correct form and yet not be able to make it.

In view of this important consideration, it will be best for us to consider first some of the things that the pupil, who has completed his primary education, ought to be able to do.

Well, what is the aim of his public school education—what are we trying to make of these boys and girls? Not *scholars*, primarily; not mechanics, nor merchants; any more than farmers or doctors. We aim to make them good and able men and women; intelligent, law-

abiding, public spirited citizens. There can be no difference of opinion, it seems to me, about this.

Now it follows from these considerations that first of all we should see to it—we as custodians of the educational interests of the several communities to which we belong should see to it that these pupils, who go out from under our care and training to bear their part in the world's work, and the world's battles, and the world's triumphs, be strong and well-equipped; that, besides their intellectual furnishings, they be able to discriminate between right and wrong, between noble and base, between true and false; that they have a firm will to choose and to pursue the right, the true, the noble. To say this is not to say that the school should teach formal ethics, and that this is its most important and most imperative duty, but rather that it should give the child an ethical training by whatever means and in whatever ways the desired result can most surely be attained, and that this duty comes *first* in order of importance.

I feel all too keenly, how inadequate this training must be at the best; I do not expect our schools to produce upright, self-controlled, unselfish men and women with the same certainty as the mint produces perfect coins, but I am very sure that if we took pains enough, and spent money enough, and—as teachers—worked earnestly enough, we could make sweeter, and purer, and more upright and more high minded boys and girls than the somewhat motley company that now issues annually from our public schools.

Keeping it in mind, then, that the question what our pupils shall become able to do, is not so impor-

tant as the question whether they shall become disposed and habituated to use such abilities as they have towards right ends, I proceed to name in order and discuss briefly the different phases of ability which I desire for, and demand of, our grammar school graduates.

First: The grammar school graduate should be able to use the English language in speaking, reading, and writing. I need not present here the more obvious applications of this statement, but there are two or three points which I wish specially to emphasize. Let me say, first, that he should be able to use the English language in speech with more precision and elegance (at least) than the "street Arab," or else we must admit that the street has the advantage of the school in this particular item of training. Most of our schools are doing fairly well this part of their work, but when we see so many children, at the time of their entrance into the high school, who are careless and slovenly in speech, and who seem to be indifferent to the matter of good articulation, and discriminating choice of words, we feel that our schools are not fully discharging their duty in this particular.

Out of his language training should come also the ability to read intelligently any author whose range is not beyond the child's immature powers. He should be able, after reading silently a page, to reproduce in his own words, the author's thought—not merely to give you the author's ideas—but to give them in their true proportions and relations, not making that most prominent which is of secondary importance, and perhaps losing the pith and moment of the whole passage.

That a grammar school graduate should be able to read English of ordinary difficulty may seem to be one of the obvious truths which I had promised to omit from this discussion, but I believe that there is in our schools a great deal of ready, fluent reading which is to a degree mechanical, which has more of sound than of sense, and that teachers should carefully discriminate between the genuine sort and its worthless counterfeit.

How many of the teachers here present systematically use exercises in silent reading with the object of developing in their pupils this ability to understand and interpret an author from his printed page? Here is a form of language study which I am sure is exceedingly profitable, and, I fear, somewhat neglected.

Of how slight importance comparatively is the ability to read well aloud—though practice in reading aloud is to be commended as a means of perfecting the pupil in oral speech. Of how much greater importance it is that a child should be given the ability to read his book, his magazine, his newspaper understandingly.

Now if we add that the child should be able to write such things as the average citizen is called upon more or less frequently to write—a letter, a business form, as a note, check, etc., a short communication for a newspaper, then it seems to me, we have covered the ground in this department.

Second: I am sure that among the things which the grammar school graduate should be able to do is this,—to observe accurately and examine thoughtfully the objects and phenomena about him. He should be possessed of keen senses and an unwearying interest in

the discovery of new truth. In this age, when the discoveries of science are being put to practical use in so many ways, and when new discoveries are multiplying so rapidly, it is especially important that all our children should be taught to keep their eyes wide open and all their senses alert.

There is great diversity among children—among people generally—in the ability to observe the facts of nature. It does not seem so much a difference in eyes and ears and noses as it is a difference in the skill to use these organs. It is often a difference merely in attention, or interest. Two boys with equally good eyesight look at a horse for a few seconds. The one is thereafter able to tell you a dozen important facts about the horse which he has observed; the other can hardly tell you more than that he is large or small, black or white, as the case may be, the general marks of size and color being about all that the unpracticed eye could take in.

Now if our children are trained to find all sorts of interesting facts in the daily on-goings of nature,—if not only animals and plants, but also stones, water, air, clouds, stars, and the minute things which escape the common observer,—are brought to their notice systematically, throughout the entire course of elementary education; and if this is done with careful adaptation to age and capacity, and by judicious methods, I am sure that our boy just quitting the grammar school will possess a most important item of a man's equipment to do a man's best work, and will have within himself one of the most unfailing sources of pure happiness.

Science work in the grammar school should be largely confined to making accurate observations, and true record of the same, but the pupil should, by all means, be led to see the more obvious relations of these facts to each other. His knowledge should be systematic, and as far as it goes scientific. He will thus be developing the power to think as well as the power to perceive. But we cannot demand that he shall attempt the broader generalizations, which tax even the mature mind.

I believe it is quite practicable to make our grammar school graduate acquainted with many of the elementary facts of those departments of natural science which until recently have only been taught in the secondary school; as,—the general properties of material bodies; the distinction between solids, liquids, and gases; the phenomena of gravitation; the peculiar properties and laws of fluids; the laws of motion; the fundamental principles of mechanics; the conceptions of energy, force, work; some of the common phenomena of sound, heat, light, and electricity; the distinctions between elements and compounds and the phenomena of chemical changes; the typical forms of plant and animal life; the processes of development and growth in the organic world.

Only by using right methods can we insure this training in natural science. There must be no cramming, no mere working of the memory.

The pupil must see and hear and smell and taste for himself, and just as truly must he compare and judge and think for himself.

Training of this sort will in the end make the mass

of our people much more intelligent on many common matters than they are now.

It would sound strange to say that the people of New Hampshire, taken as a whole, believe in the long-ago-exploded error that nature abhors a vacuum, but I am convinced from a rather extended experience with young pupils pursuing the study of physics, that the above statement is substantially true, and that the true nature of atmospheric pressure, and the real character of gaseous bodies are in my part of the country only understood by the educated minority.

I have alluded to the practice the pupil should have in recording his observations and conclusions. It is not so very simple a matter to make a good record of what one has observed, and of the inferences one has drawn. At any rate the child will not do this part of his task well, without careful instruction. I want my young scientist to be able to state clearly and concisely the facts he has discovered; to arrange these in an orderly way; to tabulate where tabulation is called for; to elucidate his record by means of drawings; and finally to state his conclusions, and make his record show clearly what he *knows* as *fact*, and what he *thinks* as *inference*.

Again, in considering what the outcome of our public primary education ought to be, we encounter the important question, to what extent we should attempt the training of the hand with a view to manual dexterity.

We must keep in mind the principle that our public schools are not designed for the training of mechanics and artisans. Manual exercises if introduced into the

curriculum must be justified upon general pedagogic grounds; they must prove their value as a means of developing those universal faculties which contribute to general usefulness in all stations and callings. That manual training, and laboratory exercise—and for our present purpose the two are very properly mentioned together—is fast making good this claim to high educational value, I for one fully believe.

While writing these words I have become interested in a copy of the "Eighth Annual Report of the United States Commissioner of Labor," a volume of some seven hundred pages exclusively devoted to the subject of "Industrial Education," in Europe and the United States. Of peculiar interest is a table of statistics presented in this volume, regarding the success of manual training both in industrial schools and in the common schools, of different sections of the United States. The testimony here gathered comes from responsible school officers not immediately connected with the teaching of manual training, and is nearly unanimous in affirming that, besides adding to, or, at least, not detracting from, the pupil's interest and progress in his scholastic pursuits, certain educational results of great value are the direct outcome of the manual exercises—as, alertness of mind, strengthened powers of observation, accuracy of thought, self-reliance, respect for manual labor, decision and strength of will.

I recall a visit made about a year ago to one of the best known manual training schools of New England. I listened to a recitation in physics by a class of boys. I have said more than once and I deliberately repeat

it now, that I never heard so excellent a recitation. There was such earnestness, such self-reliance, such appreciation of the value of accuracy!—I might say such accuracy. But I was especially impressed with the fact that those boys who made mistakes, as well as those whose work was correct, appreciated the importance of accuracy, and felt a degree of chagrin at their needless errors.

I, for one, esteem very highly the manual skill, the deftness, the habits of order and neatness, which are developed and acquired by exercises in the handling of tools and apparatus.

Take as an instance, one of the simplest exercises in the chemical laboratory; the pouring an acid from a bottle into a test tube. Let a child try this for the first time. He lays the stopper on the table, and soils both table and stopper; he pours the acid too fast or too slow; spills it on his clothing, gets his fingers covered with it; leaves the last drops to trickle down the side of the bottle, and befoul the shelf.

Now after practice in the laboratory under careful instruction the pupil will learn to do this and similar acts with deftness, exactness, neatness, dispatch; and the habit thus formed will follow him into all other lines of manual activity.

I proceed to say, in the fourth place, that the grammar school graduate should be able to make readily and accurately the ordinary computations in numbers. This will require much less time than has, until recently, been given to arithmetic in the common school course.

A very large part of our text-books in arithmetic

has consisted of exercises in logic, and a correspondingly disproportionate amount of time has been given to practice in mathematical, or necessary, reasoning.

A mistake has thus been made in two ways. The pupil has been given problems much beyond his ability to comprehend, and time has been wasted in reasoning on meaningless data, when the same exercise of the logical faculty might be had in problems on the data of science or history with great economy of time and effort.

My grammar school graduate must, then, be able to add, subtract, multiply, and divide numbers in their integral, and in their common fractional forms; he must be able to handle those denominate numbers that enter into ordinary business operations. These are comprehended in four or five "tables." I shall find no fault with him if he cannot tell me how many scruples make a dram, or how many yards are in the rod. He must be able to compute interest, and must understand the ordinary applications of percentage to business affairs, in which I do not include the technicalities of banking, brokerage, etc.

What I have to say regarding a more extended training in mathematics I will reserve till later.

I wish to say next that this typical pupil whom we have under discussion should be able to think. This word "think" is, it is true, a vague word. It is used by teachers a great deal, and often without a clear conception of its meaning. Yet it is a very expressive word.

When a teacher says, "So-and-so is a very satisfactory pupil, he thinks;" or, "I can't get my pupils to

think;" or, again, "So-and-so recites fluently, but he shows no ability to think." When teachers talking with one another use these expressions, it is pretty well understood what they mean.

A child learns by heart a rule in arithmetic, and then shows utter inability to apply the rule in solving a problem; he repeats fluently the definitions of subject, predicate, and their modifiers, and then essays to find these elements in a simple sentence, with the result, that a verb is called the subject because it happens to stand first, and an adjective is at a guess called the predicate, and in short each word called precisely what it is not. Or a child looks at two plants to compare them in their various characteristics and though he sees clearly enough the single features and can use the terms correctly, is unable to point out the resemblances or differences.

Now in these examples we say a pupil does not think, whether it is from a lack of attention, a misunderstanding of the terms, or a dropping out of some of the logical links—a failure in some of the logical steps.

Pupils often go on year after year without getting any proper instruction from their teachers in this all important matter of thinking.

Now my grammar school graduate must be able to think. He must not only see things, he must see them in their relations, and must understand the bearing of one thing upon another; he must discern causes and effects; he must have all his knowledge systematized; he must see the relation of each new fact that comes to him, to the facts that he has already gained.

This is our modern "apperception" is it not? My boy must not only be able to perceive, he must show the power to apperceive. In the subject of history, for example, he will, if he has been well taught, have a correct conception of the colonial period as contrasted with the national period; he will distinguish the period of discovery from both of these; he will know how the War of 1812 stands related to the European entanglements which had harassed the United States since its beginning as an independent nation; he will have a correct view of the subject of slavery as it affected our national life; the Civil War will not get mixed up in his mind with the Revolution, any more than his last summer's vacation will get confused in his memory with the attack of measles which followed after a six months interval. General Grant will be indissolubly associated with the Civil War; General Warren with the Battle of Bunker Hill.

I proceed to say that these pupils that we send forth from the elementary schools must have learned how to study. I mean by this two specific things. First, they must have acquired a habit of fixed and somewhat prolonged attention to one object of thought. Secondly, they must have become fairly well trained in the use of books. Under the first we require not merely attention, but examination, investigation. I hold a mineral in my hand and gaze intently upon it. Here is attention but not investigation. The latter requires that I turn it over, and see it on all sides; that I hold it in different lights; that I weigh it and measure it, that I find its density; that I scratch it with finger nail and file, in order that I may

determine its hardness; that I smell of it and taste it; that I subject it to heat and to chemical agents to determine certain more subtle properties. My investigations may lead me to examine various books. I must know what books to look for and where to look for them; and I must know how to use them when found. I must also understand the use of my dictionary in order that obscure words and phrases may become plain. Now this is study, this is investigation.

I am well aware that we may not expect children thirteen years of age to conduct an investigation precisely like that which I have just now by way of illustration described, but we may properly demand the ability to study by essentially the same methods such subjects as are within the grasp of youthful minds. We have a right to expect habits of close attention and patient investigation; an acquaintance with the student's tools and an ability to use them.

Teachers engaged in high school work have often complained to me that pupils in their first year do not seem to know how to study. Have not modern methods of objective and oral teaching led us to overlook somewhat the importance of teaching pupils how to use books? Objective and oral instruction, on the one hand, and text-book instruction, on the other, are not inconsistent—are not mutually exclusive; rather, are they mutually dependent and neither of them ought to be overlooked, or underrated.

Assuming that I have now enumerated those things which the grammar school graduate should be able to do, I pass on to speak of those things which he should know.

But first let me recapitulate. I have said that the grammar school graduate should be able to use the English language correctly in speaking and writing, and to read written or printed matter with a good understanding; that he should be able to observe and examine material objects and phenomena with precision, and with a sense of the importance attaching to a single fact in nature, and that he should be able to express and record his observations; that he should be able to use his hands—and his body in general—with a fair degree of deftness, precision, and dispatch; that he should be able to make readily and accurately the ordinary computations in numbers; that he should be able to think, to see the true relations of the multifarious ideas which ear and eye and memory bring to his mind; that he should be able to study, to give his attention closely and perseveringly to any object of thought suited to the range of his powers, and should be able to use, in simple ways, the student's tools.

The question what the grammar school graduate should know, has already to a great extent been answered.

In demanding the several abilities which I have just now enumerated, we are demanding a considerable body of knowledge—a knowledge of the English language; of arithmetic and geometry; of geography; of physics; of biology.

I have now to add a few words regarding certain branches of knowledge which, though not directly contributing to these abilities, are of immediate practical value, or which make the mind finer, if not stronger, affording adaptability, if not ability.

The grammar school graduate should have a clear knowledge of the leading facts of the history of the United States, and of England—he should know not only what the American people have achieved but whence they and their institutions sprang. He should also possess some true and vivid pictures from the histories of other lands for the sake of a broadening of his intellectual horizon.

Nothing in education can be more important than to give our youth such a training as will enable them to deal successfully with the practical questions which will confront them as they go forth to do their part in the world's work—not problems in mathematics in which the methods of deductive reasoning lead to absolute conclusions—not problems of science to which may be rigidly applied the natural laws governing in each particular case—but questions of duty, of right, of expediency—moral problems, to solve which we need to apply laws more obscure and subtle than those which govern in the material world.

We can hardly insure by any methods an adequate training for the solving of this class of questions, but it seems to me that the right study of history and biography will accomplish a great deal in this direction. To know what men have done in other times and in other lands ought to help us in deciding what we would best do here and now. History must, it seems to me, if rightly studied, develop the practical judgment.

There is a certain chapter in Prof. John Fiske's "Critical Period of American History," which, if studied carefully and comprehended fully by all our

grammar school graduates, would save at least one generation from the follies and miseries of a debased currency—or would, in other words, prepare a nation to solve a great national problem, wisely.

I want my grammar school pupils to treasure in their memories many gems of literature, as well as to read and study as many as possible of the works of our great writers. They will thus gain a very valuable discipline of the memory, but what is of much greater importance, they will secure a possession which will quicken the imagination, broaden the sympathies, elevate the taste, and even in years long after afford the purest pleasure and sweetest solace—in a word, will humanize and refine the whole man.

In these days many are demanding that the grammar school pupil shall study algebra and geometry, and at least one foreign language.

If my grammar school graduate knows many of the facts of geometry, as he will learn them by observation in connection with such studies as arithmetic and drawing and physics, and if he knows the language of algebra as he may easily and profitably learn it as a more general form of arithmetic, I will not demand anything further in the way of mathematics; and as for the foreign language I am not yet convinced that the pupil whose education is to end in the grammar school, can afford to give a year, or two years, to the study of Latin, or French, or German.

I admit that a strong argument for the educational value of either of these languages can be made, and I am disposed to insist on a four years course in some foreign language for all graduates of the high school,

but from such observations as I have been able to make I conclude that in the common schools when the necessary amount of time has been given to those subjects which I deem essential, or, at least, of paramount importance, no time will be left for Latin or French. The attempt to introduce these studies is likely to necessitate the carrying of more subjects at the same time than the child can deal with, without a confusion of the attention which is detrimental to his best development.

I have not attempted to make a scrupulously complete enumeration of the particulars of knowledge and ability which ought to be the sure outcome of primary education. I have said nothing about vocal music which I would have studied in all elementary schools. I have passed geography with a mere allusion, although here is a field in which one is tempted to stop a bit and sift the essential from the superfluous. Other omissions are doubtless suggesting themselves to you but I am sure that if the grammar school graduate has acquired the faculty and gained the knowledge which I have here set forth, the school will have done its full duty.

The demand of the hour is for an education that deals less with books and more with things; an education that aims primarily to develop power rather than to impart knowledge, and that, discriminating between an equipment of knowledge and a stock of information, uses knowledge as a means of developing power.

Such an education bringing into nice adjustment the active powers and the reflective powers, aiming at faculty, but aiming no less surely at culture—such an education will fit our children to work well and to live well.

IX.

THE CONDITIONS OF PROGRAM-MAKING IN SECONDARY SCHOOLS.

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Every school has a program or arrangement of studies. If it should be said that there are known to be some schools in which the teacher works separately and individually with each pupil, going on as rapidly or slowly as that pupil needs, without regard to the progress of others, even then, as the pupil cannot pursue all studies at the same time, there must be some plan or arrangement of studies for the individual. But although the word school, as variously used, is broad enough to cover such an institution, it may be doubted whether for purposes of scientific investigation it should be considered as a school. There is a vast difference between the relation of one pupil and tutor and the interaction of the minds of teacher and pupils in a class. This difference is not removed by the incidental gathering in one place of many receiving absolutely individual instruction. Which of these methods is the better must be determined by experience, the fact of a difference in psychological effects is apparent. The modern school rests upon

the class system of instruction. Such a system requires a program.

It may be granted that the class system should prevail and yet claimed that the choice of studies should be elective. But there is such a difference in the length of time required for the various studies, such a difference in the maturity of mind or amount of knowledge required for certain studies, such a necessary limitation of the number of subjects offered in secondary education, that even if graduation from a school should be allowed upon the completion of a certain number of hours of class work per week for four years, it would be found that virtually a limited number of courses of study had been established. As the one who arranges the program for a school that has definite courses of study must see to it that no course is unworthy, so the one who arranges electives for the several years of the period of secondary education, must so limit the possible choices that the resulting course of the individual pupil will be a satisfactory one. There must be nothing surprising in the result, nothing that has not been previously arranged for. Thus there is a program-thinking that is equivalent to program-making, and so every school has its program.

The program of a school is an arrangement of its studies that provides for their successive order through the whole time and their grouping for the individual pupil at any time. There is a longitudinal and transverse outlook. The one view is limited by the length of the course, the other by the number of studies that are pursued at the same time. The sub-

ject will be considered under these two divisions, in the effort to find the existing conditions that determine the length of time that studies are pursued and those that determine their division into groups or courses of study.

It may be considered as established without an attempt to give the grounds upon which such a decision rests, that the period for secondary education in this country at this time is four years, extending from the fourteenth to the eighteenth year of the pupil's life. The first condition of program-making with regard to the length of time that studies are to be pursued or the progress to be made in them is the amount of knowledge and power that the pupils have upon entering the school. This depends upon the character of the elementary schools of the locality in which a secondary school is placed. Reference is not here made to the variations in elementary schools of a given locality depending upon the character of teachers or pupils, yet under the same system, but the variation of schools in different localities throughout this vast country, arising from local traditions and opportunities, as well as systems and lack of systems of school organization. This variation is found both in the number and nature of the studies pursued in the elementary schools and in the underlying purpose or principle that determines the spirit of the schools. Studies are not to be divided by name into secondary and primary. They all have their elements, and in most cases these elements can be readily assimilated with the contents of the child's mind. There have long been secondary schools with what might be

called elementary departments, that is, with two or three years of what is considered the grammar school period joined with them. During this time Latin, algebra, a modern language, or some other so-called high school study may be pursued. It is evident that then the program of the proper years of secondary education must begin and continue differently from what it would if these studies were begun with its commencement. These and other studies formerly offered only in the high school have come into some grammar schools, and will continue to come. General history is classed as a secondary school study, but the history of England as well as the history of the United States is found in grammar schools. Physiology is often found in high school programs, while in large sections of the country it is found in the grammar school. Geography may mean political geography or physical geography, or both. Will it not make some difference farther on? Nature study or elementary science has become a powerful means of development in some sections, in other sections it means nothing. In the old familiar subjects of arithmetic and grammar the degree of knowledge and power sought and secured in different places varies widely. The Committee of Fifteen, in the section of their report on the correlation of studies, present a model program for elementary education. The subcommittee themselves are not unanimous on important details. Does this program represent the real working program of any considerable number of places in this country to-day? Will it ever be universally adopted? If it were adopted, would the

results under it in different localities be the same? It is at once apparent that there is in different communities a spirit of conservatism or progress, a depressing or elevating influence exerted by the people in whose hands is the management of the public schools, or certain traditional views of educational principles originating with some strong-willed superintendent or teachers and developed by their successors. Therefore it is evident that there is not, nor is there ever likely to be, a uniform standard of subjects required, or of the amount of power desired for admission to the secondary schools. There is, however, in each place a local standard for the beginning of secondary education. It is determined by arranging a carefully prepared program covering from the age of five or six, nine or eight years of the pupil's life respectively, and so indicating the amount of knowledge and power expected at fourteen. Because of the different times of beginning the elementary schools in different parts of our country, the term fourteen years of age is a better one to designate the beginning of the secondary period than the years of school life, but it must not be misunderstood. But few enter the secondary school under this age, a part enter at this age, a large number of whom finish, a larger part enter later. Yet if the course of study of the elementary schools has been laid out correctly the designation is the fitting one. Why the change to another school-house is so universally made at this year, determined by the previous length of school-life, as has already been said need not concern us here, but it may be said that for the sake of the people it

should not be made earlier, since the completion of a school course is an incentive to keep pupils in the school.

As we recognize childhood, youth, and manhood, so there is primary, secondary, and higher education. We know that the essential difference between these kinds of education is not in the subject matter but in method. The method predominantly characteristic of the period of secondary education is to be sparingly but gradually employed during the latter part of the period of primary education, while the primary method will be partly absorbed and retained in the secondary. Yet method is so closely associated with the subject matter that of necessity we mark off our divisions of programs by the amount of knowledge. From this close connection it is evident that the amount of knowledge acquired in any particular line during primary education will greatly facilitate the progress in knowledge in that line under secondary methods. Hence important variations in the programs of secondary schools will be occasioned by the character of the primary education upon which they rest. Thus we see one condition of program-making for secondary schools—namely, the amount of previous education.

The second condition of program-making in this longitudinal view is the amount of knowledge and power required in the various studies at the end of the period of secondary education. It may be asked, if there is to be a requirement at the end, why should there not be one at the beginning? Virtually there is one. As public secondary schools are under the

same management as the primary (that is, grammar) schools of the same locality, the power that makes the conditions of the completion of the lower schools establishes at the same time the requirements of the secondary. Secondary schools that receive pupils from different localities determine their own requirements of admission. Yet these requirements are largely based upon the degree of knowledge and power that the pupils have attained in the section of the country from which the school draws. On the other hand, it may be asked whether there should be any requirement of knowledge and power in particular studies at the end of the secondary period, to gain which the program should be fashioned. It seems plausible to think that, if the studies were continued on through the four years adapted to the powers of the growing youth, the proper results would be secured. But there are grave difficulties in the way, and from the nature of the case we shall never be sure that we do so adapt them. Education at the beginning is one, and includes the elements of all knowledge. But, because this is so, we cannot later on grasp all knowledge. Primary education deals with the fundamental things in the various branches of learning, but there are so many subjects adapted to the methods of secondary education that no one can follow them all. We must know the degree of knowledge and power required at the close of the period of secondary education in any particular study, in order to determine how much time must be given it in a program. In regard to this requirement for each study there is a general consensus of opinion,

varying somewhat in different sections of the country, derived from what has been done in the past and what is still doing, and expressed in some subjects in the requirements for admission to college.

The work arranged for secondary education should lead to a good position or foundation from which to proceed in higher education. The disregard of any such aim at the end in the various studies by the authors of programs, has brought about that confusion in courses of study that furnished in part the grounds that led Commissioner Harris in his letter of transmittal to the Secretary of the Interior, which accompanied the Report of the Committee of Ten, to say,—“It has been agreed on all hands that the most defective part of the education in this country is that of secondary schools.” In those parts of our land where more attention has been paid to this condition of program-making, the secondary schools are most satisfactory. The demand for a closer articulation of colleges and secondary schools is a demand for a wider statement of this condition, that is, for a statement in more branches of study. No statement is final, because there is always either progress or movement in education, depending upon movements in civilization. As the statements of the requirement of knowledge and power in the old subjects of secondary study, and the corresponding attempts to meet them have led to better statements of them, so the statements of the requirements in the newer studies and the attempts to realize them will lead to better statements of them. If the statements have been made, and the pupils desire to meet them, the demand

now becomes a condition of program-making that cannot be ignored, but if the statements have not yet been made, the requirements exist just as much, and the meeting of them will aid toward the progress of secondary education.

Thus we see that secondary schools are preparatory schools—preparatory for higher education, whether that education is to be carried on alone by the man as circumstances offer or under an organized system. All education is preparatory, the primary for the secondary, the secondary for the higher. Education never ends. It is necessary to look well to and magnify each step, but the one to follow must be regarded. There can be hardly anything more dangerous than to speak of a school as a finishing school. If the term can be properly used at all, it can be only in the sense that it is the highest school that a certain school management maintains. The preparatory character of the secondary school should be magnified. The aim sought in all the studies should influence the program-making, and that aim when attained should be a proper starting point for advanced work under other circumstances. Every secondary school may have some part in determining this condition by its own improvements and investigations, but if each may influence, no one can then absolutely determine the condition, and so each finds an external standard that it must use in arranging its program. The result to be attained is then the second condition.

There is a third condition in this lengthwise view found in the degree of maturity of mind incident to the different years of school life. A study that does

not extend through the course might demand a different amount of time, or bring about different results, according to the school year to which it was assigned. By the right adaptation of studies, economy of time can be secured, and thus room for other studies. So we have in the advancing maturity of the mind of the pupil a third condition of program-making.

In the transverse view that observes the number of studies that can be placed upon the program at the same time, one condition of program-making is found in the size of the school. The school, however small, must have a sufficient number of parallel studies to occupy advantageously the time of the pupil, but beyond this necessary amount the number of studies should not be increased except in so far as the number of the pupils and the time at the disposal of the teachers admit of economical and thorough work. As the number of subjects in which good work can be done in secondary education is very great, large schools may have a very broad program, but smaller schools, by attending to this condition, should have a narrower but equally thorough program. To have the number of studies properly adapted to the number of pupils and teachers is a legitimate and important condition of program-making. Yet how many high school programs reveal a violation of this condition! It will be claimed that in many cases other conditions of program-making compel the adoption of poor programs. There is no doubt that the existing conditions of program-making do in many cases conflict, but certainly the mere ambition to have

a broad high school should never lead to the violation of this essential condition.

When the number of studies upon a school program is greater than any one pupil can pursue, as is usually the case, there exists a second condition in this transverse view—the number of periods of school recitations that a pupil can attend daily. It had been very generally agreed that three periods per day, with the addition of music, laboratory work, and general exercises, provide for the best arrangement of the pupil's time. But the increase in the number of studies thought desirable for pupils during the years of secondary education has led to the adoption of a plan of four recitation periods per day by some of the leading schools of the country. This, too, is the plan proposed by the Committee of Ten. The question is of great importance, for upon it depends in a great measure the breadth of the course of the individual pupil. While the four recitation periods plan increases the time that the pupil spends with the teacher, it by so much at least diminishes the time for study. When already the demands under the three recitations plan have often been thought excessive, and the cry of overwork has been continually raised, it is evident that some change in the method of conducting recitations must be employed, if the number of recitations is increased. It has been proposed to have one unprepared lesson per day. All the languages and the mathematics furnish excellent material for such a lesson. Different subjects could thus have an unprepared lesson upon different days of the week. On the other hand, the method of all

the lessons might be changed, less prepared work be assigned, and more of the hour be devoted to instruction and unprepared work in all the lessons. The decision in regard to the number of periods per day greatly affects the character of the program. It does not, however, completely determine the number of the studies to be pursued at the same time, since the varying attainments sought in the different studies admit of a varying number of recitations per week. Under the joint operation of these two principles of arrangement, the number of studies that a pupil may be expected to pursue at the same time may vary in different schools from three to six or seven. The model programs of the Committee of Ten present either five or six studies.

When the five foregoing conditions have been considered and decided upon, it is still necessary, if the school offers more than the number of studies that can be pursued at the same time, for the arranger of the program to determine a plan for the grouping of the studies for the individual pupils. The demand comes from some quarters that this condition should be met by making the studies elective. It is certainly possible that the previous conditions can be met at their best and the choice of studies be elective. But it is hardly probable that many schools can have a sufficient number of classes to make the choice absolutely free, with no distinction with regard to the number of years that a pupil has been in the school, and with no other limitations. If the opportunity for the election of studies is limited by the requirement of one or two studies each year for all the pupils, and

the other studies necessary to fill the time are elected from a limited number offered; then, as but a limited number of combinations can be arranged, the school has practically provided courses of study.

Many, however, demand that definite courses or groups of studies should be arranged for the individual pupils. Though this demand is sometimes based upon expediency as the best way to meet other conditions, it rests, for the most part, upon a wide-spread belief that the various powers of the mind and the various phases of knowledge should not be neglected in primary and secondary education. This educational principle might lead to the demand of one course of study for all, were it not for the fact that certain suitable secondary studies perform substantially the same service to mental growth. This is true of the sciences; it is preëminently true of the languages. As childhood and youth are the time for the commencement of the study of foreign languages, and as they should be pursued continuously when once begun, the number of foreign languages pursued furnishes a ready basis for the division of the studies into different courses. In proportion as the number of foreign languages is diminished in each course, the amount of the historical, mathematical, science, and nature studies can be increased, and thus a special characteristic be given to each course. In considering the existing conditions of the arranging of courses of study, it is found that in addition to the educational theories there come absolute demands, if the secondary school has pupils intending to enter higher institutions. For the colleges and scientific schools

not only, as we have seen before, demand a certain amount of knowledge and power in the various studies, but they also, with few exceptions, are explicit in the group of studies essential to admission to particular courses. Throughout our entire country the agreement in the grouping of studies for admission is no greater than that in the amount of the requirement in each study.

Now that we have looked at the making of secondary school programs from both points of view, we are ready for a word upon something that has been, perhaps, expected long before—the correlation of studies. The term has been purposely omitted so far, because of the dispute in regard to its meaning, and because of the necessity of a survey of the whole field for some of its applications. If to correlate studies is to give the most important their proper time and the least important their time, it is evident that this principle has been taken for granted in much of the foregoing discussion. Furthermore, the varying opinions of the relative importance of studies, found in considering the relation of the subject to the development of the pupil's mind, to the acquisition of learning, to all the various forms of knowledge, and to the life and surroundings of the individual pupil, or, in other words, the varying opinions of the educational value of the studies have been already noted. But if, on the other hand, by correlation is meant what is also termed concentration or coördination, then that topic has not been touched. It does not seem that the unification of studies, whether through the subordination of several to one principal branch, or the

establishment of philosophic unity, or the attempt to exhibit organic relations in well-defined groups of studies, is yet an existing condition of program-making in secondary schools. It is an attractive subject, but much work in this line must first be done in experimentation, before it becomes a practical one. The attempts at concentration in primary education made by many enthusiasts are by themselves admitted not to be adapted to secondary education, and the formation of a program based upon higher principles of unification, after the example of the course of study for a classical gymnasium arranged by Dr. Frick of Germany, would be worked out with difficulty under the most favorable circumstances in this country.

When we consider the great diversity in previous education, in the degree of knowledge and power sought, in the position of studies, in the size of schools, in the daily work demanded of the pupil, and in the grouping of studies, the difficulty of an agreement upon a national program for secondary education is very apparent. Is a uniform program desirable? Is it feasible? Many things show that there is a wide-spread feeling that it is desirable. The schools that send students to college have felt the need of some approach to it, and the result has been the establishment of numerous associations of colleges and schools throughout our country. The fact that the Report of the Committee of Ten has been made, and the great interest taken in it, prove still farther the existence of the feeling. It is very desirable that pupils, as for various reasons they pass

from one school to another, should be transferred without loss of time and other difficulties. It is certainly desirable that great numbers of secondary schools in this country with poor and meagre courses should have a good model to aim at, as they would, if a standard program was established. But discordant voices are heard. The fight is now on, it is claimed, between those who would make the secondary schools subservient to the colleges and those who desire the growth of the independent high school with character building as its basal principle. To the thoughtful friends of secondary education such a strife is of little concern, except in so far as it delays the progress of the schools. Without narrowness, or bigotry, or the imputation of motives, they desire to receive that which will aid in the true solution of the secondary school question, from whatsoever source it comes. To what extent can secondary schools of this country have uniform programs? Is, for instance, the adoption of the model program of the Committee of Ten, now before the country, feasible? This program, like the program of every secondary school, is a compromise—a compromise of those principles, on the one hand, which are applicable to all schools, and on the other, of those that are determined in this case by the conditions that are found in the average, or if you wish, ideal high school, which are by no means universal. The former principles are such as the importance of pursuing a subject thoroughly and continuously after it has been once begun; the latter are such as the delaying of the choice of the full college course as late as possible.

Now if a school fulfils the object of its existence by having but one course of studies, it should not allow the excellence of its program to be diminished by those conditions that can have no application to itself. If a school is large enough to have many divisions of the class in all the courses, it is evident that it is not necessary to delay the pursuit of important studies for pupils who have early made the choice, nor to take pains, that the studies run in horizontal lines across the program for all the divisions, for the sake of economy in the employment of teachers. Again, if a school has a five or six years course it would be strange to fetter its program with the limitations of a four years program. Yet while under these circumstances the uniform program in all its details would not prevail, its essential results, if desired, might be secured. On the other hand, in the many schools of this country where the conditions determined by the size and organization of the schools are similar to those that have determined the arrangement of the uniform program, its adoption is feasible. The agreement upon a uniform program by those schools to which its conditions apply, and the aiming at its results by those schools that are under somewhat different conditions, would aid very much in the establishment of ideals of attainment for the various studies in secondary education. In studying the existing conditions of program-making we must have seen that this result is the great thing needed. The recognition of these ideals would bring about the closer articulation of colleges and secondary schools, for the colleges would see their opportunity, and the

great increase in the ways of entering college during the later years shows that they do not intend to neglect any step that would be for their advantage.

The conditions of program-making in the secondary schools of this country are, indeed, various and conflicting, but our hope is in the study of those conditions. Let us give the supremacy to those that are vital and essential. Let us seek the aid of uniformity in so far as it will help to this end. Let us, through the various agencies afforded by organized education, strive to affect the causes that would eliminate or weaken the unessential conditions. Thus shall we bring the secondary schools more nearly to their true position in that grand scheme of education, primary, secondary, and higher, that, adapting itself to the life and civilization of our times, is slowly evolving in our common country.

X.

THE RESPONSE OF THE PUBLIC SCHOOL TO THE DEMANDS OF THE PUBLIC.

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It may be said, I suppose, that the public school, in some form or other, has established itself as an institution among every people of Christendom. Monarchies and paternal governments, no less than republics and popular governments, find the school an indispensable condition of security and progress, and they find that the school must be public. To make the school accessible to all, governments are more and more coming to recognize that it must be gratuitous. At present it is becoming settled in this country that the last vestige of cost to the citizen for the education of his children is to be swept away by laws exempting him from every imaginable purchase of school material.

Thus it would seem that governments are nowhere tending to surrender the school to individual initiative and private control, but, on the contrary, are asserting more and more their own responsibility for educational conditions. In this country, let us remember, the government is but the people organized to ascertain and enforce the people's will; readiness on the part of legislators to discuss educational concerns is

but a sign of the public interest in public affairs; and what looks sometimes like needless tampering with the schools has its good side as showing that great numbers of individuals are keeping an eye on those institutions, and are keenly aware of the importance to a political career of an exhibition of educational zeal.

For an American community of whatever order, from nation to township, exerts its will by means of votes in deliberative assemblies,—that is, by means of politics; and politics is preëminently the business and the duty of the citizen,—a function among the very cleanest and the highest which he has to fulfill. We must remember—we who serve the state in school-rooms,—that the ambition to serve the state in legislative halls is, or may be, preëminently a noble ambition. The civil sin is to feel one's self above politics, and to attribute wrong motives indiscriminately to all politicians. Hence I say, in passing, that the American school is absolutely imbedded in politics, and never can or should be taken out of politics. If you suggest that this immersion in politics taints the school, I insist, on the other hand, that the constant presence of the school as a public interest, ennobles and elevates the politics.

The school being therefore the creature, the possession, of the state, it is necessary to inquire whether it is plastic to the hands of the state; that is, whether it responds sensitively to the public demand. And this query suggests the further one, whether the public demand upon the school is anywhere definitely formulated, so that we may know distinctly what this demand is, and may proceed to our duties as execu-

tors of the public will with a clear understanding of what we have to do. We think, of course, of the various legislative enactments, the laws of the state, the provisions of charters, the ordinances of cities and towns, the orders of school committees,—as expressions of the public will; and these are, in fact, the only documents we can find to instruct us conclusively as to the demand which the public makes in the matter of education. By its statutes the state calls into existence and sets to work certain educational agencies. Thus is taken the first step towards the organization of state schools.

But here we have to note that the utmost the state can do directly for education is to provide the ways and means, and to lay down in broad outline the scheme or plan on which institutions shall be conducted. Where the state, from the very nature of the case, has to stop, the activity of persons has to begin. If citizens, represented in superintendents and teachers, did not meet the state in loyal devotion to the spirit of the laws, we should have no education. The laws might be implicitly and literally obeyed, and yet the schools remain mere ghosts of schools, useless, ridiculous. It is, as we know, perfectly feasible to have excellent schools without the help or the cognizance of the state. Existence under public law guarantees nothing except that the schools shall exist and be supported in one particular way rather than in another.

All the guarantee of excellence that the public schools can have lies in the body of persons which each community succeeds in setting to work as teach-

ers and superintendents. School committees come into being under the operation of public law. These committees, however, reach the limit of their activity in their search for competent men and women who shall devote their entire energies to the work of instruction. These men and women meet the children, and here we have at last the school. All previous steps of legislation, of taxation, of every sort of deliberative and executive procedure, were intended solely to bring together under suitable conditions the community's children and the persons chosen and set apart to be the children's teachers.

At a certain point in the process of creating a school the state and town functionaries have to step aside as no longer possessing either the requisite knowledge or the requisite skill. At this point the teacher comes forward, as one who does possess the sufficient knowledge and the needed skill. All the work of legislation that has been done before was easy compared with the arduous function that now confronts the teacher. The making of a law is a work which is done when 'tis done. But the teaching of children and youth is an ever unsolved problem, a perpetual struggle toward a receding ideal. We never satisfy ourselves, even if we have the best evidences that we satisfy our immediate supervisors.

No legislator that you are likely to hear of makes a serious study of the art of legislation; but every teacher in these days has to make a serious study of education. We have learned to call it pedagogy,—this art with its principles surmised to lie concealed somewhere in the deeps of anthropologic science. I

believe the most discontented class of workers to-day are the teachers; discontented, that is, not with external conditions,—they are not likely to strike,—but with their own achievements, their own methods, with their own perception of ultimate principles. Hence we see this recent outburst of zeal for professional reading,—a zeal which is cruelly imposed upon by the host of ever ready book-makers, and which should by judicious advisers be turned away from abstruse professional literature and guided into activities more abounding in influences fitted to clear the vision and refresh the soul.

This phenomenal devotion to the study of pedagogy which we are now witnessing is one part of the response which the public school is making to the public demand. I must not leave it without a further word. This word must be one of caution. The active study of speculative pedagogy is pretty much confined, I believe, to superintendents, who do not pass their days in the midst of monotonous and exhausting tasks. We teachers have no vitality to spare. Our work, if we are much in earnest about it, consumes us almost utterly. In the deluge of pedagogical literature that the journals bring to our notice we can not choose. Let us not waste time in trying to choose. If we have found a book of educational philosophy that really invigorates our spirit and sheds light upon our problems, let us hasten to proclaim its title to our friends. But let us remain impervious to the exhortations of the advertisements and the editorial notices. Not one teacher in a hundred has any call to vex himself over the psychology of Herbart or to pretend to

be profoundly interested in experiments on the nerve-systems of frogs.

We must remember that there have always been men and women of large hearts and trained minds, who have served their generation by teaching its children and that only just now has it become the fashion to use the language of a recondite philosophy in discussing the familiar old questions. Here and there may possibly be found a superintendent who possesses the requisite solvent and interpretative power, and can transfuse into any fairly intelligent and open mind the spirit of a great educational philosophy. Happy the teacher who has such a guide. Oftener, however, the educator catches but crudely the meaning of a liberal doctrine, and tries to impose a ritual of detail, of which he has not fathomed the essential spirit, and which he accordingly cannot adjust to the culture, the experience of the teachers who may be under his direction. The true attitude of educational leaders towards the philosophizing so much in vogue is complete severance of their speculative studies from their ministrations in the class-room or the teachers' meeting. For hitherto "thoughts speculative their unsure hopes relate." There is as yet no "certain issue." Whatever is really potent for good in the present psychologizing activity will prove its potency in time by leavening the general mass of educational thought, and so will become to us conventional and inevitable. Premature attempts to obey unwonted maxims are almost sure to result in dissipation of energy, in waste of vitality.

To become more efficient servants of the public we

need such a regimen of culture as shall enlarge our human sympathies by giving us broader views of life,—a regimen of culture that shall bring us to the fountains of spiritual power, so that we may ever freshly arm ourselves against torpid routine, and meet our duties with radiance undimmed and buoyancy unimpaired. What the public asks of us is, first, that our personality be wholesome, and, secondly, that our knowledge and our executive force be sufficient. Knowledge is acquired and becomes a fixed possession; executive sufficiency also is acquired under the exigencies of the recurring trials of the situation. Wholesomeness of personality needs perennial renewal and depends on our ordering of our extra-professional lives.

Mental replenishment is what we must seek if we are not to lose ourselves in the shallows of use and wont, or in the deeps of theory. Hence I commend to every teacher to become an earnest student of some non-professional subject,—some science calling for out-door exploration, for traveling, for collecting,—such, for example, as botany, mineralogy, the study of birds and insects,—whether he has occasion to teach those subjects or not. The text-book is apt to become an incubus upon originality. There is infinite help to elasticity of spirits in the very endeavor to get away from the text-book.

Above all, I say to the teacher, become a reader of English literature. By the study of literature we come into relation with the thought of the race and replenish our depleted faculties from the great reservoirs of spiritual power. You will of course understand that I

do not speak of technical literature, which is properly not literature at all, and least of all of pedagogic literature, the tendency of which is to drain the energies, and not to recruit them,—but of the literature of the imagination, by which I mean preëminently poetry. The exact remedy and antidote for the depression of tone which earnest teachers know so well as the reaction from the strain of their daily work, are to be found in the elder, joyous poetry of generations whose lives were simpler than ours. Let me prescribe, as a perfect tonic for minds conscious of the insidious access of drowsy and benumbing routine, a course in Chaucer, Spenser, and Shakespeare, and then yet another course in Wordsworth, Tennyson, and Browning. I will commend to you a thorough course in psychology if you will let me name the author whose book you shall study: for I shall name, as the greatest of psychologists, Shakespeare, whose knowledge of the human mind, and whose power to give to that knowledge supremely beautiful and sublime expression, all nations recognize as never equalled on this planet.

Please note well that what I recommend to you is the *study* of literature, and not mere superficial reading, such as we give to to-day's novels. To such reading as this, not carried to excess, I make no objection; only it is not a recreative exercise, like the serious study of classic works.

For reading that shall be confessedly related to the work of teaching, choose the lives of great teachers, and certain books that have succeeded in making the history of educational doctrine clear and interesting.

The rise of a multifarious pedagogical literature and the appearance in our educational world of certain German schemes of philosophy, are signs of the prevailing discontent of which I spoke above. This discontent in the teaching body is a generous emotion, and contains the promise of ultimate, though it may be of late, good; for even while it indicates that our ideals are vague in our minds, it yet shows that we have ideals, and that our condition is therefore hopeful.

With this pedagogical discontent the public at large, I believe, has very little concern, having very different discontents of its own, which it shows in manifold ways. Having to speak, if it is to speak at all, only through legislation, and finding all large ambitions thwarted by the impossibility of greatly increasing taxation, the public is practically inarticulate, and has to make its desires known to observers in the same way that Nature reveals her laws—that is, by the phenomena to which they give rise. Consisting of a vast multitude of persons, the public is practically impersonal, and must be studied in its institutions. Hence a student of American education must examine not only our educational legislation and the embodiments of this legislation in public schools, but must include within the scope of his inquiry all the other agencies by which the education of American youth is effected.

It becomes obvious at once that the American demand for education is only partially satisfied by the schools which the public can create as its own,—is only partially satisfied, I may say, by the schools which it either can afford to create or knows how to

create. Public education has to be supplemented on an immense scale by instrumentalities not public. The proportion of extra public institutions is rapidly increasing. This development of a great area of education quite aloof from state action is a most interesting phenomenon, and must be seriously studied by any one who purposes to theorize or prophesy concerning the future of public education itself.

For it is in this field of private or endowed education that freedom of development is greatest, and that tendencies therefore reveal themselves most clearly. The response of the public school to the demand of the public is slow. The private school conforms instantly to the demands of its patrons. The corporate, or endowed, school is almost equally free to act. I might instance the kindergarten, which was long a surely private enterprise and has but just begun to become a public one. I might instance commercial schools, which, long already a care of the state in Germany, still remain private ventures in this country. So I might adduce the industrial and mechanical schools, which the progressive cities are beginning to inaugurate.

Looking now at the changes which the really responsive educational institutions have made in order better to satisfy the public demand, we find, as the most conspicuous of all, the various phases of development which group themselves under what we know as the *elective system*. The very naming of election suggests of course President Eliot and the reforms which under his leadership have made Harvard college the great example of educational progress to this generation.

There could be no greater mistake than to suppose that the elective principle is merely an idea of President Eliot, imposed on a governing board which he by his personal influence induced to consent to its introduction. It is all that, of course, but it is also much more. It is distinctly a response to a public demand. The branches of knowledge, the opportunities for culture, the paths of the intellectual life which open to youth, are incalculably manifold. Obviously, to educate a multitude of youths, all differing in aptitudes and tastes, a multitude of subjects must be recognized. To overthrow the old fixed course was a bold conception; but the old fixed course had become an anachronism, and was ripe for shaking.

The reception of the elective principle in varying degrees by other colleges, and the immense impulse it has given to the growth of Harvard, have abundantly justified the reform by showing that the system is securely lodged in the public esteem. What the public hardly knew how to say before, it is now saying to us in unmistakable language. This message plainly directs us to multiply opportunities, to multiply modes of escape from undesired routines, to enrich and diversify courses, so that we may adjust our children's mental life to their prospects, their powers, their tastes. For the more intelligent the family is which sends its children to the public school, the more earnestly it debates what the son or the daughter shall study, and the more concerned it is that the young minds shall have neither too much work nor too little, nor yet of the wrong kind to match, perhaps, certain ambitions, or to suit the peculiarities of natural endowment. I

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say, let the school consult the interests of intelligent families. If there is a feature in our public education to-day fitted to cause misgiving in the minds of its friends, it is the increasing withdrawal of children from the public school by the very families that give the most thought to the subject of education. Our disquisitions on the values of studies have no consolation for parents. A cultured community, comprising diverse religious creeds, inheriting the most heterogeneous proclivities of race and popular tradition, can find satisfaction for its intellectual needs in nothing less than multitudinous opportunity. Prescription of one course in primary and secondary education can not be thought of as a response to the public demand.

The only true correlation of studies is that which can be organized in the family, where theories of education are little considered, but where the child is known, and the child's future is a subject of profound anxiety. The very necessity of thinking what choice of studies the child should make would of itself become a reactive influence of untold value to the parents. The feeling that they, too, have helped to shape the child's school work would engage them more closely as partners in the whole function of public education in general, and would be in some measure a check to the tendency to complain of grievances.

In the very midst of our secondary education we find an unnatural dividing line, on the one side of which is free choice of studies, while on the other are rigid courses. The college is plastic, and takes the form solicited by the public utility. The secondary school moves with much greater difficulty, and it moves

in a different way. At the present moment the secondary school is much belated. What it has done has been to divide itself into two or three kinds of schools, and thus to offer choice between a few fixed courses, assuming, however, that it is competent to devise groupings of studies, which it is justified in strictly prescribing as constituting inviolable wholes. When the secondary school shall have abolished this anomaly, and shall have made all its studies freely available, not according to some fancy of assumed inner cohesion, and not in any enforced order except the natural one of antecedent and consequent, our public education will have taken a most important step toward a better satisfaction of the public demand.

The public does not read—it cares nothing for,—reports of committees of ten or fifteen, yet with no other public interest is the great public in so close touch as with the schools. The community, however much or however little it says in audible shape, thinks a great deal on the concrete forms of education, knows very well when its schools are good and strong and the teachers efficient. Not much gratitude is expressed,—not so much, I make bold to say, as the teachers deserve to hear and would be greatly stimulated and encouraged by hearing. But we know after all how it is. We know what happiness is diffused in the family when the children come home radiant with enthusiasm and looking forward with eagerness to another session of school in the morning. We must learn to be content with hearing very little of this happiness described to us directly in terms of thankfulness. Yet the fact remains, beyond

all possibility of doubt, that upon the faithfulness, the skill, the character, of teachers, laboring in obscurity, without a thought of fame, depends, more than upon any other agency of modern life, the cheerfulness and hopefulness of tone, the contentment with social conditions, the respect for law, the sense of public duty, which are the chief foundation of good citizenship in the American republic.

XI.

CHILD-STUDY: METHODS AND RESULTS.

BY E. W. SCRIPTURE, PH. D., YALE UNIVERSITY.

What do we mean by child-study? What is it for? Of course we can study children in many different ways and for many different purposes.

We do not mean an examination of pupils to see whether they are ready for promotion, or an inspection of the child at entrance of school, or on other occasions, to determine whether or not he is fit for school-work. Such examinations are undoubtedly of great importance, but, although such work is intimately connected with child-study, this subject itself has a quite different purpose.

We also do not mean records like those of "Galton's Life History Album." In this album the weight, height, eye-sight, sickness, and other events of the particular child are recorded year by year from birth to old age and death. The genealogical record is prepared; photographs are inserted periodically. Such a record, faithfully kept by the mother till the child reaches maturity, and then by the person himself, is of very great value to the individual in showing him what diseases he is likely to inherit, in furnishing his physician a history of his health, in truthfully filling out a

life-insurance policy, in readily supplying biographical news to newspapers and magazines if the child becomes famous, and similar useful and entertaining purposes.

I say that child-study does not deal with these things because these are all performed for the sake of an individual. The purpose is not the scientific one of discovering fundamental laws, but is a narrow, practical one. Scientific work must not be confined to a particular individual, a particular class, or a particular occasion; and its methods are more reliable and searching than such as are or can be employed in class-examinations or records by parents.

I must also exclude the investigations of the contents of children's minds on entering school, such as have been made in Germany and America. The percentage of children was determined who knew what was meant by a house, a sphere, a meadow, a cow, etc. The results of such questionings depend on the accidents of environment and education; they are really examinations, and hardly belong to child-study.

The purpose of child-study, as I understand it, is the investigation of how child-nature changes under varying conditions. For example, how children's minds develop with increasing age, how body-weight alters with various foods, how the mental and bodily health varies with different amounts of mental and bodily work and play, etc.

The science of physics does not consist in instructions for building dynamos or in studying the recoil of cannons, but it does consist in a study of the fundamental facts and laws underlying all mechanical and

electrical phenomena. Child-study, from my point of view, is, in like manner, the fundamental science of the development of child-nature. Of course, this includes bodily development, but our subject this evening will be confined to the mental development only.

How shall we investigate the laws of child-nature? There are three methods. These I shall call the unscientific, the semi-scientific, and the scientific. To make clear to you the differences among these methods I will give you some examples of each.

1. The unscientific. This method makes no pretense at scientific work; at least, it ought not to do so. The whole thing is exceedingly simple; you take sheets of paper and write down what you observe. In the first place you try to recollect incidents of your own childhood. Here are a couple of specimens of work by normal school pupils at Worcester:

[Series 1, No. 6086. Reported at age of nineteen, after interval of eight or ten years.] I used to think a great deal of a certain girl whom my mother did not think much of. This girl was not a nice girl. She told many falsehoods. I liked this girl so well that I often shielded her from shame by saying that I myself told her lies. I would take all the blame willingly, that my mother might like her as well as I did.

[Series 1, No. 6088. Reported at age nineteen, after interval of nine years.] I distinctly remember hiding, under a piazza, a doll, which belonged to a child four or five years old. A girl of my own age helped me hide it, and, as far as I know, it has remained a secret to this day. We hid the doll through no feeling or malice toward the owner, as far as I can remember.

In the next place you are to record observations of children,—anything you see them doing.

[Series 1, No. 6241. Child observed. Joe, aged seven years.] Joe was standing at the sink drinking a glass of water. He had

his back turned to the other people in the room. I heard him talking to himself and went nearer to him. He was making believe to be drinking in a saloon. He leaned up against the side of the sink, crossed his feet, and made some remarks about the quality of the drink, which I could not hear. When he got through with the water, he put the glass on the shelf, and after paying the man, received back his change and left the sink, remarking, "That's all right. I guess I'll be going now."

Such records can be classified. One heading is under thoughts and reasonings.¹ For example, the following case shows how a child confused the thing with the word :

[Four years, six months.] F. was making words with her blocks. She put w and e down, and asked her mother what it spelled. Mrs. M. said, "we." F. "What can I make now?" Mrs. M. "Put a t after the e." F. "What does that make?" Mrs. M. "Wet." F. "If I do n't put t on it, it will be dry now, won't it?"

Here is a case of false reasoning by analogy :

[Five years.] This boy went out in the pouring rain and stood in the middle of the road. He had no hat on. Mother. "E, come in here out of the rain." E. "No, I'm going to stay out here till I'm soaked, so I'll grow. I ain't going to wear dresses any more. I want a pair of pants."

Finally, we have a case of monkey reasoning.

[Seven years.] I showed E. a picture of a little girl about twelve years old. E. looked at it a long time and said, "She has a pretty dress on." She turned the picture over and looked on the back of it. I asked her what she was looking on the back of the picture for. "Well," she said, "I wanted to see if her dress was buttoned in the back."

Child-study of this kind is undoubtedly of very great

¹ BROWN, *Some records of the thoughts and reasonings of children*, Pedagogical Seminary, 1892, II, 358.

value on account of the interest in the children which it awakens in teachers and normal-school pupils. It takes their minds from routine work and makes them look at children. And that is something gained. Also various interesting and amusing anecdotes are to be found in the material thus collected. That it is of any scientific value I am not prepared to admit. In fact, it is very seriously misleading and injurious to have it supposed by people who do such work or people who hear about it, that it has any relation in any way to science. Scientific work is just as unlike such work, as a government survey of the state of Maine is unlike a gossip letter about Maine, written by a summer boarder at Bar Harbor.

Mr. Russell has clearly disclaimed any attempt at science in gathering these records, but I have lately noticed a tendency at Worcester to claim that is really science. Such a claim cannot be admitted by any scientist and is likely to seriously injure this excellent method of instructing teachers.

2. The semi-scientific. This method introduces a little more system into the work.

Probably as good an illustration of the method as I can use is *A Study in Children's Drawings*, by Prof. Barnes of California. He selected a story from the famous German child's book, "Struwelpeter." The story ran thus:

STORY OF JOHNNY LOOK-IN-THE-AIR.

As he trudged along to school
It was always Johnny's rule
To be looking at the sky—
And the clouds that floated by;

But what just before him lay,
In his way,
Johnny never thought about;
So that every one cried out—
“Look at little Johnny there,
Little Johnny Look-in-the-Air.”

Running just in Johnny's way,
Came a little dog one day;
Johnny's eyes were still astray
Up on high in the sky;
And he never heard them cry—
“Johnny, mind, the dog is nigh!”
What happens now?
Bump!
Dump!
Down they fell with such a thump,
Dog and Johnny in a lump!
They almost broke their bones
So hard they tumbled on the stones.

And so forth for eight stanzas.

The children were given paper and pencils, and after writing their names and ages, they listened while the teacher read the poem to them. They were then told that they were to draw one or more pictures from the story, and it was read to them once more. There was no conversation; and no other directions were given. The drawing occupied from fifteen minutes to an hour, and when completed the papers were collected. Papers were sent in from 6,393 children.

What parts of the story appealed most to the children? There are nine possible scenes that may be drawn: Johnny going to school, Johnny approaching the dog, Johnny falling over the dog, Johnny approaching the river, Johnny falling into the river, Johnny

floating in the river, Johnny being rescued, Johnny dripping on the bank, Johnny going home.

You might expect the children to draw the catastrophe scenes, as being the most forcible. It was not so. The most common scene was Johnny approaching the dog. The next was Johnny being rescued. The next was Johnny approaching the river.

Children will naturally draw the scenes that most interest them. They evidently prefer the scenes that lead up to a climax, rather than the climax itself. The period of anticipation and of the working out of a story is more attractive than the horrors of the catastrophe or the sequel of "they all lived happily afterwards." This corresponds to the taste of the past generation which appreciated Dickens and Thackeray. It is to be presumed that by the time these children are grown up their taste will be sufficiently developed to enjoy the favorite novels of the present age, in which moral filth and mental horror extend from the first page to the last.

The children drew as many scenes as they pleased. At six years the average was 1.6. As they grow older they draw more and more, till the girls reach thirteen years and the boys fourteen years; at this time the average is a little over three scenes each. From this time on they draw less and less. This would seem to indicate that girls at thirteen and boys at fourteen become less daring in expression. The children who declined to draw at all were all over thirteen. The children seem to become less daring in expressing themselves by drawing after the ages of puberty.

Numerous excellent studies of this character have

been made, some of them of great practical value. Nevertheless, they can hardly be called truly scientific.

3. The scientific. This method is radically different from the others. All the facts must be collected in one or more of three ways: 1, observation and classification governed by the rules and technique of statistics and treated by the mathematical methods of the science of probabilities; 2, experiment in the rigid, scientific meaning; 3, measurement according to the proper methods.

I would like to explain and illustrate these methods fully, but I must confine myself to a few examples of psychological experiment and measurement.

Some of the experiments will be so simple that any one of common sense can perform them; other experiments require the finest scientific apparatus. I have thought it best to speak of all kinds, for I like to suit everybody. The scientist who is accustomed to sneer at child-study as trash will find that it can be pursued as accurately as physics or astronomy. On the other hand, teachers who are afraid of apparatus will find that some good work can be done with home-made instruments, provided it be done properly. In short, there is work of all kinds to be done.

[From this point the address consisted of a stereopticon exhibition, accompanied by explanations of apparatus, methods, and results of psychological experiments on school children. As it is impossible to explain these without illustrations, the author refers to his "Studies from the Yale Psychological Laboratory," Vol. II, for the work done in New Haven, and to his book, "Thinking, Feeling, Doing," for explanation of the general methods employed in such work.]

XII.

WHAT THE SCHOOL OWES THE COMMUNITY.

BY PRESIDENT GEORGE C. CHASE, LL. D., OF BATES COLLEGE.

Two months from this the homes of our country will be alive with expectancy, astir with eager preparation. From the seaside and the mountains, from the fields and the streets, from the hovels and the homes, there will be gathering an army of 15,000,000, with its 400,000 leaders, all making ready to begin the year's campaign. This vast host—five times as numerous as that of Xerxes—will be summoned into being, officered, drilled, and led by the decree of a great free people. The public school is the living embodiment of a great purpose,—the purpose of the American commonwealth to attain its full stature, to work out its complete destiny. All other popular institutions, whether national, state, or municipal, are partial and limited, both in scope and aim. Fire departments, water systems, police arrangements, are maintained for definite and easily specified ends. The school alone has a purpose as comprehensive, as illimitable, as the wealth, the aspirations, and the possibilities of the community that it represents. What does the school owe the community? The furtherance of every interest by which the community may attain

its peculiar and appropriate ideal. That ideal will vary with times, climates, countries, institutions, peoples. The obligation of the German school to the German community is quite other than the obligation of the American school to the American community. The Almighty has never given precisely the same mission to any two peoples. We may reverently sum up the obligations of any school system to its community by saying that it exists that the people "may have life, and may have it more abundantly." Or we may express our thought more concretely by declaring that the school pays its debt to the community in proportion as it develops good citizens. For it is only through good citizenship that the community can gain its appointed goal.

Our problem naturally resolves itself, then, into an analysis of the elements of good citizenship and the methods by which the school should contribute to these. What are the requisites of good citizenship? Obviously a people's industries, using the word in its large sense, are the bases of all prosperity. "He that will not work, neither shall he eat," is as applicable to the community as to the individuals that compose it. A nation of vagabonds and idlers is a nation of paupers. It lacks the sinews, not merely of war, but of peace—of life. There must be a degree of wealth, in order that man may rise above that daily struggle with want which chains him to companionship with the brute. And the greater the accumulation of wealth, provided it be properly distributed, the greater man's opportunity for attaining his birthright as the child of reason and the lord of nature and her forces.

The nation in which the industrial instinct is strong and well directed meets the first, the inexorable, condition for its intellectual and spiritual, no less than its material, welfare. Other things being equal, a people will be great and prosperous in proportion to the number of its industrious citizens. It will be weak and miserable in proportion to the number of its shirks—whether these be the luckless children of want or the pampered sons of wealth. Every sane and healthy man who is living solely upon the labors of others, whether he be beggar or prince, is an incumbrance and a curse to his community, and is inviting, even if he does not receive, the fate of the drone. The habit of work, the love of useful employment, if developed at all, must be acquired early. The person who has not learned the pleasure of helpful activities before he reaches the age of twenty, will never learn it.

Plainly, then, the school owes the community a curriculum and administration suited to the development and promotion of a prosperous industrial life. Doubtless any rational course, if intelligently directed, will contribute to this result. Difficulties mastered in any direction tend to form the habit of mastering difficulties wherever encountered. Yet the school program of the past has often been fatally narrow and ill chosen. It has dealt too much with abstractions and too little with realities. It has presented too large a share of "studies for ornament" and too small a share of "studies for use." It has unintentionally fostered the impression that knowledge of books is preferable to knowledge of things; that

those callings in which the hand is servant to the brain are less honorable than those which make drafts directly upon the intellect; that the merchant and the professional man rank higher than the mechanic and the engineer. We all know of instances in which it has spoiled good carpenters to make poor lawyers. Now nothing can be more clear than the duty of the school to emphasize the dignity, not to say the parity, of all callings in which conscientious thought is placed at the service of humanity. Moreover, its curriculum and administration should be broad enough to recognize and stimulate individual gifts.

While no public school should attempt to take the place of the old apprenticeship system and to turn out carpenters, machinists, dentists, or blacksmiths, it should afford such general training, both intellectual and manual, as will help the boy to find himself and his place in the industrial and social life in which he is soon to become a factor. Nor will such training be less useful to the future doctor or minister than to the future draughtsman. We have long insisted upon the value of language, and literature study as the only means for ensuring the grace, clearness, and force of utterance that make a man at home in society. We should also insist upon that training of eye, ear, and hand which imparts the sense of harmony, the skill, and the good taste so essential to the wise use and enjoyment of life, whatever one's calling or profession. Many of us are hopeless bunglers in all matters requiring the quick eye and the dexterous touch, simply because our education was fatally defective.

The school owes the community such courses of study and such appliances as will bring to light the latent gifts of each pupil, and thus inspire him with self-respect and a high purpose to take some worthy place among the world's workers.

Many a bright boy has been given over for a dunce, because neither his teacher nor his studies ever touched the one spring that could summon into healthy action all the powers of his being. And so, instead of being enriched by a Watts, or an Edison, at least by an able and cheerful worker, the community has been burdened by a blunderer, a knave, or a pauper. What a gain would be effected! what a magazine of forces now wasted or unused would be utilized, could the public school help each pupil wisely to choose his life course! What needed correction would be given to that false popular sentiment which insists that a gentleman must have soft hands and flabby muscles! There can be no question that the vast army of tramps which the future historian of our country will note as a phenomenon first manifesting itself in the second half of the nineteenth century, owes its proportions in no small degree to the narrow and defective character of our public school curriculum.

The introduction of nature study into our schools—of botany, ornithology, mineralogy, chemistry, and physics, has wonderfully broadened their resources and quickened the life of our children; and the fruits are already appearing in the new applications of the great forces of nature to the service of man. Much remains to be done in properly co-ordinating these studies, in effectively teaching them, and in bringing

them into direct relation with the living interests of mankind. In the country school they are still comparatively unknown, or sadly ill-taught. There is no surer way to arrest the tide of immigration to the town, to make our fields and forests beautiful and productive, and to restore dignity and satisfaction to rural life, than to render our schools the medium through which our children shall be introduced to the beauty and the beneficence of nature. Let them, in addition, afford the facilities which shall develop skill, taste, inventiveness, and constructive power, and which shall have breadth enough to call out the individuality of each pupil, and we shall multiply a thousand-fold the material and the æsthetic resources of our people; shall create hundreds of useful industries now unknown, and shall pour into the national lap wealth sufficient to purchase honorable and happy leisure for all. That these results may be secured, the school must first of all put at the service of the community teachers discerning enough to see just what nature offers to them in the endowments of each child,—teachers sympathetic enough to call these into life, and to direct them to appropriate ends. No teacher should be tolerated in the school-room who does not from his heart honor all worthy effort, whether of hand or brain. The spirit and atmosphere of the school should be such that every boy, every girl, should count one, and but one; irrespective of parentage and position. Let the public school do its full duty, and the present bitterness and strife between employers and employed might be eliminated in a single generation; and the money that is wasted in strikes and lock-outs be employed in the

erection of libraries and museums, where the tastes, enjoyments, and fruitful efforts of an harmonious school-course might be continued through a life-time to the adornment and enrichment of the whole nation.

The various methods of manual training, including cooking and sewing, which are finding their way into our courses of study, together with the rapid extension of nature studies, foreshadow a new era of industrial triumphs through the full discharge by the school of its first great obligation to the community.

The payment of the first debt goes far toward ensuring that of the second; namely, the development of an intelligent interest in our government. Take away from the demagogue his audience of thriftless and discontented hearers and his occupation is gone. Partisanship and political corruption thrive upon idleness and want. Industrial prosperity dissolves the charm attaching to the greenback and the dollar of our fathers.

A thriving community furnishes few adherents to communism. Tweed and Tammany methods find little favor among skilled and intelligent working men. Still the school owes to the community the systematic preparation of every child for the responsibilities of popular government. In this, the primary condition for success is that the teacher himself be a patriot. No man, no woman, should be employed in a public school, whose soul does not glow with an absorbing patriotism. It matters not how cultured, accomplished, or expert the teacher may be in his particular department; nor how distinguished in general scholarship. If his heart does not throb with love for his native

land; if he is not thrilled at the very mention of Adams, and Hamilton, and Washington, of Sumner, and Grant, and Lincoln; if the story of his country and its progress, from the sacred beginnings at Plymouth to its very latest deliverance and triumph, be not more fascinating to him than any romance,—let him not dare enter the school-room. Nor should his enthusiasm be of the frenzied and indiscriminating kind that vents itself in the stump speech and the Fourth-of-July oration. It should be an intelligent enthusiasm springing from the conscientious study of the great social and religious problems connected with the settlement of the country, of the successive questions that arose in the development of the colonies into a federation, and of the evolution of the federation into a great, composite, but united people. It should be “a zeal according to knowledge”; and, therefore, capable of sifting motives, comparing policies, and determining results. It should be a patriotism capable of estimating the blessings and the triumphs of peace, no less than the victories of war. It should be alive to the vital questions of to-day, and jealously sensitive to the honor of our country as represented in its jurists, statesmen, and diplomatists. It should be candid, wisely tolerant, and free from partisan bias. It should stand both for principles and for men, and should seek no reward save the approbation of conscience. It should be intensely interested in municipal reforms and good home-government; and should take pride in the history, the traditions, the institutions, and the life of the neighborhood. It should delight in good streets, good public and private buildings, good

homes, and good citizens. Patriotism like this is contagious, especially among children.

Yet this personal element should be supplemented by the wisely conducted study of history, civil government, and economics. These should be illustrated, so far as possible, by the events, the institutions, and the usages with which the pupils are most familiar, and should be supplemented by themes, talks, and dialogues based on the collateral reading of biography, fiction, poetry, the newspaper, and the review. Always and everywhere the teacher should hold up the ideal patriot, the man of uncompromising integrity, of thorough self-devotion, and disinterested purpose.

If our cities ever become permanently capable of self-government, it must be by the inculcation in the school of a sturdy but conscientious and intelligent patriotism. We have but lately seen even one righteous man of this type save our largest and wickedest city. When the school fully pays what it owes to the community it will rear whole armies of Dr. Parkhursts.

The national flag floating above our school houses is a valuable educator; could it have floated over a school-house in every Southern parish during the thirty years preceding 1860, we should never have heard of a Southern Confederacy. Let the flag symbolize living, daily patriotism in the school and in the next generation we shall see the ward politician and his henchmen utterly put to rout. It must be a genuine patriotism and as wise as it is fervid; for it must wrestle with political wickedness in high places,—not infrequently, indeed, intrenched in the school board and even in the superintendent's office.

The school that sends out its pupils each industrious and patriotic, has made a good beginning toward paying its debt to the community. But it has other obligations equally imperative. When Cato the Censor, after denouncing the study of Greek all through his youth and rugged manhood, began to learn the language at the age of eighty, he exemplified a great truth,—that life is incomplete and unsatisfactory if it be not crowned with beauty. Matthew Arnold, after paying tribute to the thrift and the sturdy patriotism of the great middle class of England, expresses his utter dissatisfaction with that type of humanity, on the ground that it is not interesting; and he invokes for the attainment of a complete life, what he chooses to call culture. We all know that he was wholly right. Without "sweetness and light," our lives are painfully barren and commonplace. And, again, upon the school rests the sacred obligation of teaching the community the nobler meanings and uses of existence.

This it must in the main effect through the medium of what in the colleges and universities of one hundred years ago were fitly called the Humanities. To give to life richness and fullness, to ensure to it beauty and elevation, we must turn to literature. And under this term I include the classics of both the ancient and the modern tongues. I do not here insist that our youth, without regard to individuality or environment, must read a certain amount of Greek and Latin, of French, German, or Italian. I leave details to be arranged by others as opportunities permit or circumstances require. What I do maintain is that only through the study of literature in one or

more languages, always including our own, can we ensure the community that refinement, that reverence for the ideal in conduct, and in life, that fine sense of harmony, the soul of art, without which society is hopelessly vulgar and commonplace.

Never yet has a comprehensively great man or a great people been developed without the aid of literature. It is in literature as no where else that we feel the inspiration of noble personality. Literature alone brings us into sympathetic companionship with the wisest, the wittiest, the profoundest of mankind, and permits us to share in their enjoyments, to see with their eyes; to walk with them through the world of thought and achievement and quenchless yearning, and to feel their very hearts beat as they struggle with the problems of life or forecast the mysteries of eternity.

No youth can appreciatively read even one of the simplest of our American authors, like Whittier or Longfellow, without henceforth gazing upon new heavens and a new earth. Nor can he become familiar with one of Hawthorne's great moral tragedies, like "The Scarlet Letter" or "The Marble Faun," without feeling that he has sounded the depths of the human heart and fathomed its most awful mysteries. In reading, under the guidance of a good teacher, one of these great masterpieces of art, these heroic delineations of the ecstasy and the misery of sin, the pupil experiences that expansion, that quickening of both his intellectual and his moral nature, that purging of his passions and emotions, which Aristotle declares to be the special function of

a great tragedy. What can inspire a youth to self-reliance and to self-development like an essay from Emerson? What can make him genial and sympathetic and kindly humorous like a few pages from Charles Lamb? What can kindle his imagination and awaken his sense of the sublime like Milton's "Paradise Lost"? What can open the eyes and the heart to the gracious and soothing influences of nature like Wordsworth's "Ode on the Intimations of Immortality"? What unfold human life with its infinite possibilities for good or evil like Shakespeare's "Hamlet"? What set all his powers of intellect tingling with strenuous effort like Browning's "Saul"? What paint for him the ideal of perfect manhood like Tennyson's "King Arthur"?

Without the inspiring influence of noble literature, the best part of a youth's nature is doomed to perpetual slumber. Nor can the value of literature to the community ever be estimated. It throws over the homeliest and hardest life the graces of refinement and lends to it the charm of poetry. It goes far toward redeeming the most unlovely home from coarseness and even from evil. It plants flowers in the garden and sets vines growing upon the wall. It shuts out discontent and makes the peasant happier than the king.

The poems of Burns and the romances of Walter Scott have done more to make the Scottish laborer contented and happy than all the theories of Adam Smith or the legislation of Scottish statesmen from James I to Mr. Gladstone. At this hour the land of Scott and Burns is taking toll from every English speaking peo-

ple on the globe. There is no more vital bond of union among a people than delight in a great national literature. Even a single poem, like "America" or "The Star Spangled Banner," can do much toward uniting our great heterogeneous nation, by ties of sympathy and fellowship strong as blood. If the diverse elements in America ever fully coalesce it must be, in good measure, through the assimilating power of a great and fondly cherished literature. No community can be truly great and wise and happy till it has become responsive to the kindly influence of its historians, novelists, and poets. All the other fine arts follow in the train of literature.

We have still to name one obligation of the school to the community that is paramount. It is the obligation to train the whole body of youth to sound principles of action—to develop character. If, indeed, the school returns its pupils to the community, industrious, patriotic, and refined, it has already effected much in character-building. But a result of such supreme importance requires more than incidental care. It should be made the chief end of all school work, of all instruction.

History and observation show that no community can long survive the prevalence of immorality; that the deep, abiding, and decisive strength of a people is in high purposes, in unswerving devotion to lofty moral ideals. Mr. Kidd, in his "Social Evolution," has shown by an array of facts and figures which admit no question that the great governing nations of modern times tower above their rivals in the social and industrial competition of their day, not through

superiority of intellect, but through their surpassing strength of character.

In pure intellectual power, the Latin races of Europe excel the Teutonic, yet England and Germany and not France and Italy, are the shaping forces in the old-world civilizations. How futile is mere intellectual force to arrest decay and even extinction, he illustrates in this striking quotation from Mr. Galton . . . "the average ability of the Athenian race is, on the lowest possible estimate, very nearly two grades higher than our own; that is, about as much as our race is above that of the African negro. This estimate, which may seem prodigious to some, is confirmed by the quick intelligence and high culture of the Athenian commonalty, before whom literary works were recited, and works of art exhibited, of a far more severe character than could possibly be appreciated by the average man of our race, the calibre of whose intellect is easily gauged by a glance at the contents of a railway bookstall." That literary and artistic taste developed to a high degree may exist in natures of the most monstrous depravity, we have recently been taught by the proceedings of an English law court. No, the school can give sure guaranty of its power to form character only as it makes character a distinctive and indispensable end. And for the attainment of this end it must look first of all to the personality of the teacher. No man should for one hour permit himself to bear the sacred name of teacher, unless he unite in his own character absolute purity, uncompromising honesty, and the gentleness, courage, and generosity required of King Arthur's

Knights. He should feel the inspiration of Sir Galahad

My strength is as the strength of ten
Because my heart is pure.

The teacher who in spite of his high calling—his priesthood—is uncleanly in his habits, foul in his speech, his breath, or his person, addicted to vices, or even weaknesses, is a blasphemer in God's holiest temple, and should be driven out, if need be, with "a whip of small cords." Should he be religious? Yes, in the best sense of the word. The soul of religion is reverence, and no man or woman destitute of this quality should assume to mould character. The teacher should be a Christian in spirit and practice. This secured, it matters not whether he be Protestant, Catholic, or of un-named persuasion.

Such a teacher will find constant opportunities to appeal to ethical motives. Every day he will exemplify and opportunely inculcate truthfulness, courtesy, sincerity, courage, and humanity. If he have both boys and girls as pupils, he will teach the former chivalrous politeness, tact, and manly appreciation; the latter, modesty, unaffectedness, and womanly dignity. He will, like Shakespeare's duke, find unobtrusive "sermons in stones . . . and good in everything." He will know how to point a moral while he adorns a tale. He will teach humanity and kindness toward all. For this purpose he will involve the special aid of poetry and good fiction. He will know how to introduce his pupils to such lines as Cowper's,

"I would not enter on my list of friends
The man who ruthlessly sets foot upon a worm,"—

to such books as that favorite of school children, "Black Beauty." He will make such studies as psychology more than a dry anatomy of faculties and emotions. Under his instruction, habit will give its own fearful warning, and enforce its own clear morals. The passions will reveal their subtle and mysterious origin, their unrelenting tyranny and fateful consequences; the will its grand sovereignty or its helpless and pitiful servitude. Psychology rightly taught is the best possible treatise upon ethics.

True character building is a work that the school should share with a thousand other agencies—the chief of these being the home and the church. But it is safe to say that for millions of the children in our country this work must be done, if done at all, in the public school. It is plain truth, without exaggeration, that the schools of our country are shaping the moral forces that will ultimately rule or ruin our free institutions. And there are some elements in a sound character for which the school is almost solely responsible. One of these is that sense of obligation to the community which will make private interests seem small and mean when balanced against the common well-being. It is in the school alone—the school made up of children of various races and nationalities—that the sense of obligation to the community can be successfully cultivated. The development of this sense in his pupils should be to every teacher the test of his success. Teachers and pupils should survey together the great debt which they owe to the community; and should be co-laborers in a continuous effort for its improvement—for its material, intellectual, and moral

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welfare. They should dwell loyally not merely upon the glories of the past but upon the possibilities of the future. And the perfected commonwealth, happy in itself and in its healthful relations with all the world, should be the goal of their fondest hopes, their most cherished aspirations. Let the 15,000,000 pupils in our land and their 400,000 leaders feel the grandeur of such hopes, such aspirations, during our next year and the school will have begun in good degree the payment of its debt to the community.

XIII.

DEPARTMENTAL INSTRUCTION.

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The application of the departmental system of instruction to the primary grades of the public schools would not be seriously advocated by many persons who have had practical experience in educational matters. On the other hand, it will generally be admitted that in colleges and in high schools,—especially those with a large number of instructors,—the work of teaching must be done by specialists, and, consequently, the instruction must be departmental. This leaves for our present consideration the so-called grammar grades,—the fifth to the ninth years, inclusive, of the pupils' lives in school.

The field is also somewhat further limited by conditions prevailing in some schools beyond the present control of the school authorities. These may operate either to prevent or to facilitate the adoption of this system. Thus, it is manifestly out of the question, in rural or ungraded schools, where all the work of instruction, for pupils of every degree of proficiency, is performed by a single teacher. On the other hand, buildings are sometimes so constructed that the experiment could be very easily made; as in places where a

large number of pupils, including those of three or four grades, constitute a single school, in charge of a principal and several assistants, and are accommodated in a main room with recitation rooms connecting directly with it.

I also dismiss from present consideration the work done by special teachers,—as of music, drawing, nature study, sewing, etc. For, while it may be that the present discussion upon the advisability of departmental instruction has been promoted,—perhaps, even, in some degree, suggested,—by the employment of such teachers, their work is hardly included within the fair meaning of our topic. The work of such instructors has been rendered necessary chiefly by the introduction of new branches of study into the curriculum, for the instruction in which the average grade teacher was not competent; so that the special teachers have been desirable, primarily and chiefly, to train the regular teachers, and as model lessons are always an important element in such training, their weekly or otherwise periodical lessons in the various school rooms are given in the presence of the regular teachers, and at least as much for the benefit of the teachers themselves as for the direct instruction of the pupils.

But for many years the tendency has been, for schools below secondary grade, to erect buildings so planned and divided, that a single room contains but a single grade of pupils,—or, at most, two grades, differing but slightly in their attainments, and usually able to be instructed together in at least some portions of their work.

Given then, a school building, in which are taught

the pupils of grammar grade, so divided and classified that those doing the work of a given year are together in the same room, is it better for the pupils that each grade shall be in charge of a single teacher, who is made responsible for their training and instruction, or is it better that the work of the curriculum shall be separated, in some manner, into departments, and that the teachers shall go about from room to room, teaching one class after another, according to their degrees of advancement, in certain subjects?

I shall endeavor to keep uppermost in my own thought, throughout my discussion, the interest which should always receive the first and the chief consideration, in settling every question of school management and policy. The important question is not whether one of these plans is more agreeable to the teachers; their pleasure and gratification are only an incidental and subordinate element in the problem. The important question,—indeed, the only question which we have any right to ask,—is, which plan is the better *for the pupils*? It is, of course, true, that the degree of a teacher's pleasure and gratification will affect the interest and consequently the success with which that teacher will do the prescribed work,—but, if some other than the now prevalent method is essentially or ultimately superior in the advantage it brings to the pupil, that method must be adopted, and, in the meantime, if it be necessary, we must be developing a class of teachers who will find their pleasure as well as their duty in what is, upon the whole, best for the children.

There have been some experiments in various places, with departmental instruction, and the results, in the

view of those who have observed them, have been somewhat diverse. How far pre-conceived opinions may have affected any of these judgments upon its success or failure, we cannot determine. We are bound to note that the judgments are not unanimous. It is also true that the conditions of the different experiments have not been identical, and that neither the method nor the scope of them has been the same in all cases. Thus, at Utica, N. Y., where the system was adopted in a very radical form,—even reaching into the primary schools,—it is the judgment of the present superintendent, with such light and experience as he now has, to favor, throughout the entire grammar school course, “the grade room plan.” At Hartford, Conn.,—concerning which place I have not at hand the details of the experiment,—the plan was tried and was abandoned. On the other hand, at Springfield, Mass., the last report of Superintendent Balliet says that departmental teaching has been extended in nearly all the grammar schools of that city as far as the seventh grade inclusive, and he adds that wherever it has been tried, “the results have been good.” The school committee of Quincy, Mass., say that “this scheme of special teaching has passed the experimental stage and has proved so successful that more will be done in this direction.” Not to multiply unduly the witnesses upon this side, I also note favorable testimony, after actual trial, in the last school reports of Middleborough, Marlboro, and Clinton, in the same state. Most teachers have doubtless read the careful and candid statement of methods and results in one Boston grammar school,—which is not specified,—written by

Supervisor Conley and printed in the *Journal of Education*. One of the most significant features of this article is the statement made as to the effects of the system upon the discipline of the school, upon the spirit of the pupils, and upon the opinions of the teachers regarding it. The experiment has also been in progress in several of the grammar schools of that city during the past year, but no official report of the results has been made. But it would be very unlikely that the principals and the teachers, at least, would be entirely unanimous in all respects. In none of the places named has the system been tried a sufficient length of time to demonstrate experimentally to all observers beyond the possibility of a mistake that claims either for or against its desirability are sound.

But it may fairly be said that there are sufficient facts at hand to illustrate and strengthen the arguments likely to be adduced. The facts, it will be noted, come from places quite diverse,—in size, in character of population, in responsiveness to the demands of progress, in the nature of their leadership. The arguments are not lacking. And while further actual experience may change somewhat our estimate of the advantages and the disadvantages now claimed upon one side and the other, the discussion must proceed with such light as we have and with constant reference to the fundamental principles of education.

Perhaps the most obvious argument in favor of the departmental system of instruction is found in the fact that, among the three or four teachers who instruct the highest three grades of the grammar schools, there are found, naturally,—almost inevitably,—differences in

tastes and capacities. No state of things is more familiar to a superintendent than that arising from a discovery that one of his teachers is especially strong in some one or more of the departments of the work, and perhaps very weak in some one or more. In fact, especial and unusual strength in one line is almost sure to be accompanied or offset by noticeable weakness in another; the teacher with a "hobby" almost inevitably exceedingly dislikes some other department. Even in primary work, it is noticed that some are able to secure great results with numbers, others with reading, and still others with music or nature work. In the higher grades, these differences, while, perhaps, no more real and no larger, relatively speaking, are much more obvious, especially to the casual observer, or to the pupil. Even the community, which in reality knows very little about the schools, often ascertains so much. Such a teacher will not only teach her favorite subject better than the other branches, but the favorite subject will almost inevitably, in some way or another, by some pretext or another, get more than its due share of the time of the teacher and of the pupils. Now the pupils are certain to be affected by these things and to receive a bias in favor of the branches which their teacher for the time being most thoroughly enjoys, and consequently teaches most and best. The wider the circle of knowledge with which the pupil is employed, the easier will it be for him to neglect some portion of it in favor of another, the stronger will the bias be likely to become, and the more powerfully will he be affected thereby. Then, when the pupil passes along to the next room, he encounters another influence in

favor of another branch, and the conflict of this with the current already established in his mind, produces something of a shock, perhaps a severe mental conflict, possibly even an antagonism to the requirements of the school itself, and there is bound to be something lost in efficiency from the work of the teacher until the new conditions have become settled. There is also a loss of what may be called continuity of instruction; for even if two successive teachers present a given subject according to the same general plan, there must be some loss of power in affecting the pupil, because no two minds operate in precisely the same manner, and the mind of the pupil cannot immediately adapt itself to the peculiarities of his new instructor. Still further, the instructor himself cannot know at once upon what knowledge on the part of his pupils he may presume, or to what motive or stimulus they are responsive, and there is a loss of power until he obtains this information. From these causes, in the aggregate, there will be a very material impairment of the efficiency in the work of the teacher, when there is a change every year, as there must be by the grade room plan. But, by the departmental system, the work of instruction in each branch is carried along by the same teacher for three or more successive years, and no one of these losses occurs. The survey of the work by the teachers must embrace several grades; it must, therefore, have both a forward and a backward look, while the grade room teacher has no such comprehensive grasp, but stands stock still, and too often frozen besides, like the town-pump in winter.

If we consider efficiency of instruction alone, it

would seem to be very evident that the departmental system, by which each teacher is usually giving instruction in the branches of study most agreeable and for which the best training and advantages have been available, presents very material superiority over the grade room plan.

The answer to this argument is as obvious as the argument itself, and, like the argument, it rests upon a basis of solid fact. How far the facts are pertinent to the present discussion, it will be our purpose, later, to inquire. The teacher, it is said, who gives instruction in a limited portion of the school curriculum, is, to some extent at least, a specialist. He will become, it is further said, in the vast majority of cases, a teacher of subjects, rather than of children. Of all persons in the world, the mere specialist is least likely to be a true teacher of children.

Construing the term strictly, the genuine specialist is an ignorant person, whether he be a grocer, a weaver, or a mathematician; for narrow-mindedness is the most characteristic quality of ignorance. The necessary effects of such narrow-mindedness will be intensified in the children, and it will come to pass that the better the work of such teachers is done in their own special fields, the more sure they are to render their pupils narrow and circumscribed and perverse. It is said that these results will be more certain and disastrous in the case of children in grammar schools than with college students, because the former are more susceptible to immediate influences than the latter.

Some of these affirmations I should be the last to deny; but I should not admit the validity of the in-

ference which they are made to support. Thus, in the majority of cases, the tendency of highly specialized teaching is undoubtedly narrowing to the teacher. That it is not necessarily narrowing, many of us can emphatically testify, from our acquaintance with broad-minded men and women who have not been narrowed by it.

To one other consideration affecting the kind of specialization which departmental instruction requires, I shall make another reference; just now, it is proper to remark that the conditions under which this partially specialized teaching is done in grammar schools are very different from those surrounding the highly specialized work of colleges and universities. The teachers who are doing departmental work in grammar schools are in adjoining rooms all the school day. They are necessarily thrown much together; almost inevitably they discuss together freely the peculiarities and the work of their pupils; they report, often and frankly, separately and together, to the principal of the building, who must have an oversight of the entire work, and into whose hands must be committed the determination of many matters of administrative detail, like the settlement of the relative rights and duties of different teachers, lessons for home study, special cases of backward or indifferent pupils, and the like. These elements of oversight, conference, comparison, and combined experience are nearly or quite lacking in the work of the genuine and thorough-going specialist, whose work is assumed, without sufficient basis, to be the type of what we should have under the departmental system in grammar schools.

We must also remember what this plan is intended to displace. Are we not constantly told that the present system of graded schools is narrowing in its tendency, both to teachers and to pupils? Have we not all secretly felt that, even if the criticism had no sufficient warrant of truth, at least there lurked in it a danger in that direction? And have we not been searching for ways and means of "enriching,"—that is, of broadening,—the grammar school course? Now let us consider a moment the present state of things: here is a teacher who does all the work of training and instructing a class or grade of pupils for an entire school year. Next year she will take another class and repeat the year's routine,—and so on, indefinitely.

These classes are substantially of the same age and of the same degree of proficiency. The new plan does indeed reduce the number of branches to which each teacher gives attention; but, at the same time, it compels a somewhat comprehensive view of at least one subject,—which the other does not,—and it gives time and opportunity to secure that view; far more important than this, it also increases, three-fold, the number of children with whom each teacher is dealing at a given time.

It seems to me that the teacher who might not be broadened by a multiplicity of subjects cannot fail, provided there is present the smallest degree of the teacher's spirit, to be broadened by this increased contact with children,—a greater number at one time and an acquaintance continuing for three years instead of one—growing in sympathy with him, in knowledge of them, and thereby in richness of life.

For,—to relieve this somewhat technical discussion with a thought from the poet who must have often been in our thoughts during these days,—all our contrivings and all the wisdom of our books are as nothing in making the world better for us, compared with the affection and the happiness of the children,—those “living poems,” beside whom all the rest are dead.

It has been further objected to the departmental system of instruction that it prevents, or renders so difficult as practically to prevent, a correlation of subjects. Assuming without argument, for our present purpose, what probably the vast majority of teachers and students of education believe, that such a correlation is desirable,—it is to be said that not even the most ardent advocates of correlation,—in the sense of concentration,—believe it to be actually attainable in the same degree for the grammar as for the primary schools. It may then be made clear that desirable and practical forms of correlation are no less practicable under the departmental than under the present system. The teaching force in grammar schools is far too limited in numbers to allow each different subject upon the programme to be assigned to a separate teacher.

Since, then, there must be a combination of subjects for each teacher, it will naturally result that those subjects which are most closely related will be combined. Thus we shall have a number of groups,—each constituting a “department” for this purpose. The precise combinations which will best serve the interests of the pupils may in part need to be determined by

trial and experience. But such branches as geography and history, or literature and language, or arithmetic and the elements of geometry, or perhaps geography and nature study, or language and the elements of science, will be among those most likely to prove attractive and valuable. Drawing may continue to be taught separately, but certain features will be utilized in or correlated with, many departments,—especially manual training, geography, and nature study. Reading, as such, should certainly be unnecessary in the seventh and higher grades, except as it is incidental and supplementary to geography, history, and literature.

Work so planned and carried on cannot lead to an objectionable or narrowing form of specialization; and such a system of groups would, it is believed, result in a greater degree of actual correlation than is now commonly found. It would also do much to demonstrate to children in a practical manner that all branches of learning have relations to each other and that all truth is a unit. It is desirable to correlate not only with this end in view, but, further, also, to make clear to the pupils the fact of the unity of the process of education. It will contribute in some degree to this result if the administration of the schools be of such a nature that the lines between the grades shall be somewhat less formal and arbitrary than at present.

There is another consideration suggested at this point. If the instruction in a school is carried on according to the departmental plan, the group of grades so affected, rather than single grades, would become in the minds of the pupils, and of the com-

munity, and, indeed, of the teachers, the embodiment for the time being, of the school system. This might seem, at first thought,—and perhaps in some sense, would be the fact,—to deprive teachers of individual and personal power, to some extent. The loyalty of the children would go out toward the school as an institution rather than toward individual teachers. The principal would continue to personify the school in a very large degree. I am inclined to very serious doubts whether we should thereby lose anything which it is desirable, on the whole, to retain. We should still rely upon the skill and the intelligence of the teachers, and that skill and intelligence would stand for more, in the aggregate, than is now the case. The limits of the teacher's power, and influence, and interest, would be greatly broadened. Each teacher, from the principal downward, would feel himself or herself to belong to the school as a whole and not to a single grade. The corps of teachers as a whole would have and would exert a greater power than now; and the really great or superior teacher would have an opportunity to exert personal influence not only upon one class at a time, but upon several classes, as well as upon other teachers. So it would extend constantly throughout the entire school and not be confined, as at present is the case in a very large degree, to the limits of a single grade. The instruction would be better balanced; each teacher would naturally try to do and to secure the best work, because the conditions would be favorable by reason of the work being so apportioned as to make it as congenial as possible, and also because the excellence of any teacher's work as well as the deficiencies would

be so evident by reason of comparisons readily made that conscience and pride and self-interest would concur in their appeals to every instructor.

Again, while the process of education is a unit, and while such terms as high, grammar, and primary schools have no pedagogical significance whatever, and are used simply for convenience,—it is true that every grade or group of grades is in some sense both place and means of transition from past to future work. It must be regarded as a distinct misfortune that high schools have hitherto been so radically different from grammar schools both in curriculum and in methods of administration. The differences in the curriculums are being gradually reduced; but it may be doubted whether this alone will be sufficient to bridge the great gulf hitherto existing between the ninth and the tenth years in school. There is no justification for this great gulf in the children themselves,—it is purely conventional and arbitrary. Statistics would show that a surprising number of high school pupils drop out of the course during their first year, and nearly as many more during their second; but those who remain until the beginning of the third,—who get acclimated, as it were,—for the most part finish the course and graduate. From some cause they lose interest in their work shortly after they enter the high school. Why this is so, is a most interesting inquiry. High school teachers say they are not well “prepared.” Grammar school teachers say that the teaching in the high schools is inferior. It would perhaps be instructive to know, if we could, what the children themselves say.

It is not out of place to suggest the query whether

the vast difference between the methods of administration prevailing in high schools and those in grammar schools may not have something to do with this state of things. The children go from the ninth grade, where they have been subject to the sometimes too tender oversight and solicitude of one teacher, to the high school, where too often, especially in large cities, they are not an especial cause of care and oversight to anybody. The withdrawal of pressure is so sudden that actual collapse often results. The blame belongs partly to the grammar schools, which have not left them at all to their own devices; partly to the high schools, which have no method but to throw them entirely upon their own resources,—but most of all, to the system, which renders these two opposite errors almost inevitable. The departmental system of instruction may provide a remedy. By adopting, for the highest grades of the grammar schools, accountability to more than one person, the pupil is sure to be thrown more upon himself; the change, while not so radical as to withdraw at once such supervision as may be desirable, is sufficient to prepare him in no small degree for the changed conditions of the high school itself.

Probably it would not be wise in most places to force the departmental system radically and suddenly upon an unwilling corps of teachers. Its introduction in a gradual and somewhat tentative manner would, in my opinion, be the wisest course. Some slight exchange of duties between teachers who know each other well, who understand each other's methods and plans of work, who have confidence in and respect for each other, and who, therefore, would not feel

themselves subjected unfairly to severe and unreasonable comparisons and rivalries would, usually, if approved and encouraged by supervisors, in a short time, without friction and without ill-feeling and jealousy, lead to the desired result. When the change has been made in this manner, with an efficient, wide-awake, and comparatively permanent corps of teachers, failures and dissatisfaction have not been reported. These have been known to occur where either the method or the degree of the change has been otherwise.

Finally, there is strong evidence to the effect that, in such case, discipline has not suffered. Indeed the testimony has been that the work has gone on more smoothly, with less trouble between teachers and pupils, with greater interest in the work on the part of the pupils, and with the general approbation of the community. That practical difficulties not now foreseen may sometimes be encountered is of course not impossible; that these would be such as could not be met and overcome, if approached with intelligence and tact, is not, I think, probable. It is said that this method of administration will require a superior body of teachers. This can scarcely be regarded as a serious objection. Every proposed improvement in the schools is found to depend ultimately upon this condition. Other things are desirable, but better teachers are always essential. The standard of the teaching force is constantly rising, and we shall be able to meet, with a reasonable degree of success, the additional requisitions. It will be a great misfortune when any particular class of

teachers are able to prevent a forward movement, because they suppose or imagine that their own particular duties will be rendered less agreeable thereby. As was said at the beginning of this discussion, it is the interests of the pupils that must be allowed to determine the matter.

From this stand-point, I find the weight of argument and of testimony in favor of the proposed innovation. In increased efficiency of instruction, in the probability that rational correlation would be promoted rather than hindered, in the broader interest and activity of the teachers who have hitherto confined their attention to a single class of pupils, in the increased mutual understanding that would be necessitated among teachers, in the relaxation of grade lines, in the easier transition to the high school,—it seems to me that there are great possibilities of advantages not to be obtained by persisting in the present method. As to the extent of the change that is desirable, I have purposely refrained from expressing any opinion,—believing that this must be determined by experience. The seventh, eighth, and ninth grades are naturally the field to be occupied first. But it will not be surprising if it is found later that even in the fifth and sixth grades the system may profitably be introduced.

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